



SEQUENCE LISTING

<110> GLYNNE, RICHARD J.
HONG, NANCY AI-HUA
NELMS, KEATS A.
WU, HUA

<120> SENSIN POLYPEPTIDES, ENCODING NUCLEIC ACIDS, MUTATIONS,
AND METHODS OF THEIR IDENTIFICATION AND USE

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 Phe Leu Thr Ser Leu Val Thr Gly Leu Ser Thr Glu Arg Thr Lys Ser
 385 390 395 400
 Ser Ser Ser Glu Cys Ser Ala Val Ile Pro Ala Phe Phe Glu Cys Leu
 405 410 415

Arg	Phe	Ile	Met	Gln	Gln	Asn	Leu	Gly	Glu	Glu	Glu	Met	Val	Gln	Met	420	425	430	
Leu	Ile	Asn	Glu	Gln	Leu	Ile	Pro	Phe	Ile	Asp	Thr	Val	Leu	Lys	Asp	435	440	445	
Ser	Gly	Leu	His	His	Gly	Pro	Met	Phe	Asp	His	Leu	Ala	Asp	Thr	Leu	450	455	460	
Ser	Ser	Trp	Glu	Ala	Lys	Ala	Asp	Ala	Glu	Arg	Asp	Pro	Gly	Ala	Val	465	470	475	480
Tyr	Asn	Leu	Glu	Asn	Val	Leu	Leu	Ser	Phe	Trp	Gly	Arg	Leu	Ser	Glu	485	490	495	
Ile	Cys	Thr	Glu	Lys	Ile	Arg	Gln	Pro	Glu	Ala	Asp	Val	Lys	Ser	Val	500	505	510	
Leu	Cys	Val	Ser	Ser	Leu	Val	Gly	Val	Leu	Gln	Arg	Pro	Arg	Ser	Ser	515	520	525	
Leu	Glu	Leu	His	Arg	Lys	Lys	Thr	Ala	Gln	Val	Arg	Phe	Ala	Ile	Asn	530	535	540	
Ile	Pro	Glu	Ala	His	Lys	Gly	Asp	Glu	Lys	Ser	Met	Ser	Ser	Glu	Gly	545	550	555	560
Glu	Asn	Ser	Glu	Gly	Ser	Asp	Gly	Gly	Ala	Gln	Ser	Pro	Leu	Ser	Asn	565	570	575	
Thr	Ser	Ser	Asp	Leu	Val	Ser	Pro	Leu	Arg	Lys	Lys	Pro	Leu	Glu	Asp	580	585	590	
Leu	Val	Cys	Lys	Leu	Ala	Glu	Val	Ser	Ile	Ser	Phe	Val	Asn	Glu	Arg	595	600	605	
Lys	Ser	Glu	Gln	His	Leu	Gln	Phe	Leu	Ser	Thr	Leu	Leu	Asp	Ser	Phe	610	615	620	
Ser	Ser	Val	Gln	Val	Phe	Asn	Ile	Leu	Leu	Ser	Asp	Lys	Gln	Lys	Asn	625	630	635	640
Val	Val	Lys	Ala	Lys	Pro	Leu	Glu	Ile	Thr	Lys	Leu	Ala	Glu	Lys	Asn	645	650	655	
Pro	Ala	Val	Lys	Phe	Leu	Tyr	His	Lys	Leu	Ile	Gly	Trp	Leu	Asn	Asp	660	665	670	
Ser	Gln	Lys	Glu	Asp	Gly	Gly	Phe	Leu	Val	Asp	Ile	Leu	Tyr	Ser	Ala	675	680	685	
Leu	Arg	Cys	Cys	Asp	Ser	Gly	Val	Glu	Arg	Lys	Glu	Val	Leu	Asp	Asp	690	695	700	

Leu	Thr	Lys	Ala	Cys	Ser	Ser	Ser	Asp	Lys	His	Ala	Leu	Val	Thr	Pro	705	710	715	720
Trp	Leu	Lys	Gly	Ser	Ile	Leu	Gly	Glu	Lys	Leu	Val	Ala	Leu	Ala	Asp	725	730	735	
Cys	Leu	Cys	Asp	Lys	Asp	Leu	Glu	Ala	Thr	Thr	Ser	Glu	Ser	His	Ser	740	745	750	
Ser	Glu	Gln	Trp	Ser	Leu	Leu	Arg	Leu	Ala	Leu	Ser	Gln	His	Val	Lys	755	760	765	
Asn	Asp	Tyr	Leu	Ile	Gly	Glu	Val	Tyr	Val	Gly	Arg	Ile	Ile	Val	Lys	770	775	780	
Leu	His	Glu	Thr	Leu	Ser	Lys	Thr	Lys	Asp	Leu	Ser	Glu	Ala	Ala	Asn	785	790	795	800
Ser	Asp	Ser	Ser	Val	Ser	Phe	Val	Cys	Asp	Val	Val	His	Ser	Phe	Phe	805	810	815	
Ser	Ser	Ala	Gly	Gly	Gly	Leu	Leu	Met	Pro	Pro	Ser	Glu	Asp	Leu	Leu	820	825	830	
Leu	Thr	Leu	Phe	Gln	Leu	Cys	Ala	Gln	Ser	Lys	Glu	Arg	Thr	His	Leu	835	840	845	
Pro	Asp	Phe	Leu	Ile	Cys	Lys	Leu	Lys	Asn	Thr	Leu	Leu	Ser	Gly	Val	850	855	860	
Asn	Leu	Leu	Val	His	Gln	Thr	Ala	Ser	Thr	Tyr	Glu	Gln	Ser	Thr	Phe	865	870	875	880
Leu	Arg	Leu	Ser	Val	Leu	Trp	Leu	Lys	Asp	Gln	Val	Gln	Ser	Ser	Ala	885	890	895	
Leu	Asp	Asn	Thr	Ser	Leu	Gln	Val	Leu	Leu	Ser	Ala	Ala	Gly	Asp	Leu	900	905	910	
Leu	Gly	Thr	Leu	Val	Glu	Ser	Glu	Asp	Thr	Ser	Leu	Leu	Gly	Val	Tyr	915	920	925	
Ile	Gly	Ser	Val	Met	Pro	Ser	Asp	Ser	Glu	Trp	Glu	Lys	Met	Arg	Gln	930	935	940	
Ala	Leu	Pro	Val	Gln	Trp	Leu	His	Arg	Pro	Leu	Leu	Glu	Gly	Arg	Leu	945	950	955	960
Ser	Leu	Asn	Tyr	Glu	Cys	Phe	Lys	Thr	Asp	Phe	Lys	Glu	Gln	Asp	Thr	965	970	975	
Lys	Thr	Leu	Pro	Asn	His	Leu	Cys	Thr	Ser	Ser	Leu	Leu	Ser	Lys	Met	980	985	990	

Ile Leu Val Ala Gln Lys Lys Lys Leu Val Leu Glu Asp Asn Val Leu
 995 1000 1005
 Glu Lys Ile Ile Ala Glu Leu Leu Tyr Ser Leu Gln Trp Cys Glu Glu
 1010 1015 1020
 Leu Asp Asn Ala Pro Ser Phe Leu Ser Gly Phe Cys Gly Ile Leu Gln
 1025 1030 1035 1040
 Lys Met Asn Ile Thr Tyr Ser Asn Leu Ser Val Leu Ser Glu Thr Ser
 1045 1050 1055
 Ser Leu Leu Gln Leu Leu Phe Asp Arg Ser Arg Lys Asn Gly Thr Leu
 1060 1065 1070
 Trp Ser Leu Ile Ile Ala Lys Leu Ile Leu Ser Arg Ser Ile Ser Ser
 1075 1080 1085
 Asp Glu Val Lys Pro Tyr Tyr Lys Arg Lys Glu Ser Phe Phe Pro Leu
 1090 1095 1100
 Thr Glu Gly Ser Leu His Thr Ile Gln Ser Leu Cys Pro Phe Leu Ser
 1105 1110 1115 1120
 Lys Glu Glu Lys Lys Glu Phe Ser Ala His Ser Ile Pro Ala Phe Leu
 1125 1130 1135
 Gly Trp Thr Lys Glu Asp Leu Cys Ser Ile Asn Gly Ala Phe Gly His
 1140 1145 1150
 Leu Ala Ile Phe Asn Ser Cys Leu Gln Thr Arg Ser Ile Asp Asp Lys
 1155 1160 1165
 Gln Leu Leu His Gly Ile Leu Lys Ile Ile Thr Ser Trp Arg Lys Gln
 1170 1175 1180
 His Glu Asp Ile Phe Leu Phe Ser Cys Asn Leu Ser Glu Ala Ser Pro
 1185 1190 1195 1200
 Glu Val Leu Gly Leu Asn Ile Glu Ile Met Arg Phe Leu Ser Leu Phe
 1205 1210 1215
 Leu Lys His Cys Ala Tyr Pro Leu Pro Leu Ala Asp Ser Glu Trp Asp
 1220 1225 1230
 Phe Ile Met Cys Ser Met Leu Ala Trp Leu Glu Thr Thr Ser Glu Asn
 1235 1240 1245
 Gln Ala Leu Tyr Ser Val Pro Leu Val Gln Leu Phe Ala Cys Val Ser
 1250 1255 1260
 Phe Asp Leu Ala Cys Asp Leu Cys Ala Phe Phe Asp Ser Ile Thr Pro
 1265 1270 1275 1280

Asp Ile Val Asp Asn Leu Pro Val Asn Leu Ile Ser Glu Trp Lys Glu
 1285 1290 1295
 Phe Phe Ser Lys Gly Ile His Ser Leu Leu Leu Pro Leu Leu Val Asn
 1300 1305 1310
 Ala Ile Gly Glu Asn Lys Asp Leu Ser Glu Thr Ser Phe Gln Asn Ala
 1315 1320 1325
 Met Leu Lys Pro Met Cys Glu Thr Leu Thr Tyr Ile Ser Lys Asp Gln
 1330 1335 1340
 Leu Leu Ser His Lys Leu Pro Ala Arg Leu Val Ala Ser Gln Lys Thr
 1345 1350 1355 1360
 Asn Leu Pro Glu His Leu Gln Thr Leu Leu Asn Thr Leu Thr Pro Leu
 1365 1370 1375
 Leu Leu Phe Arg Ala Arg Pro Val Gln Ile Ala Ala Tyr His Met Leu
 1380 1385 1390
 Cys Lys Leu Met Pro Glu Leu Pro Gln His Asp Gln Asp Asn Leu Arg
 1395 1400 1405
 Ser Tyr Gly Asp Glu Glu Glu Glu Pro Ala Leu Ser Pro Pro Ala Ala
 1410 1415 1420
 Leu Met Ser Leu Leu Ser Ser Gln Glu Glu Leu Leu Glu Asn Val Leu
 1425 1430 1435 1440
 Gly Cys Val Pro Val Gly Gln Ile Val Thr Val Lys Pro Leu Ser Glu
 1445 1450 1455
 Asp Phe Cys Tyr Val Leu Gly Tyr Leu Leu Thr Trp Lys Leu Ile Leu
 1460 1465 1470
 Thr Phe Phe Lys Ala Ala Ser Ser Gln Leu Arg Ala Leu Tyr Ser Met
 1475 1480 1485
 Tyr Leu Arg Lys Thr Lys Ser Leu Asn Lys Leu Leu Tyr His Leu Phe
 1490 1495 1500
 Arg Leu Met Pro Glu Asn Pro Thr Tyr Gly Glu Thr Ala Ile Glu Val
 1505 1510 1515 1520
 Ser Ser Lys Asp Pro Lys Thr Phe Phe Thr Glu Glu Val Gln Leu Ser
 1525 1530 1535
 Ile Arg Glu Thr Ala Thr Leu Pro Tyr His Ile Pro His Leu Ala Cys
 1540 1545 1550
 Ser Val Tyr His Met Thr Leu Lys Asp Leu Pro Ala Met Val Arg Leu
 1555 1560 1565

Trp Trp Asn Ser Ser Glu Lys Arg Val Phe Asn Ile Val Asp Arg Phe
 1570 1575 1580
 Thr Ser Lys Tyr Val Ser Asn Val Leu Ser Phe Gln Glu Ile Ser Ser
 1585 1590 1595 1600
 Val Gln Thr Ser Thr Gln Leu Phe Asn Gly Met Thr Val Lys Ala Arg
 1605 1610 1615
 Ala Thr Thr Arg Glu Val Met Ala Thr Tyr Thr Ile Glu Asp Ile Val
 1620 1625 1630
 Ile Glu Leu Ile Ile Gln Leu Pro Ser Asn Tyr Pro Leu Gly Ser Ile
 1635 1640 1645
 Thr Val Glu Ser Gly Lys Arg Ile Gly Val Ala Val Gln Gln Trp Arg
 1650 1655 1660
 Asn Trp Met Leu Gln Leu Ser Thr Tyr Leu Thr His Gln Asn Gly Ser
 1665 1670 1675 1680
 Ile Met Glu Gly Leu Ala Leu Trp Lys Asn Asn Val Asp Lys Arg Phe
 1685 1690 1695
 Glu Gly Val Glu Asp Cys Met Ile Cys Phe Ser Val Ile His Gly Phe
 1700 1705 1710
 Asn Tyr Ser Leu Pro Lys Lys Ala Cys Arg Thr Cys Lys Lys Lys Phe
 1715 1720 1725
 His Ser Ala Cys Leu Tyr Lys Trp Phe Thr Ser Ser Asn Lys Ser Thr
 1730 1735 1740
 Cys Pro Leu Cys Arg Glu Thr Phe Phe
 1745 1750

<210> 6
 <211> 1752
 <212> PRT
 <213> Homo sapiens

<400> 6
 Met Gly Gly Lys Asn Lys Gln Arg Thr Lys Gly Asn Leu Arg Pro Ser
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 Asn Ser Gly Arg Ala Ala Glu Leu Leu Ala Lys Glu Gln Gly Thr Val
 20 25 30
 Pro Gly Phe Ile Gly Phe Gly Thr Ser Gln Ser Asp Leu Gly Tyr Val
 35 40 45
 Pro Ala Ile Gln Gly Ala Glu Glu Ile Asp Ser Leu Val Asp Ser Asp
 50 55 60

Phe Arg Met Val Leu Arg Lys Leu Ser Lys Lys Asp Val Thr Thr Lys
 65 70 75 80
 Leu Lys Ala Met Gln Glu Phe Gly Thr Met Cys Thr Glu Arg Asp Thr
 85 90 95
 Glu Thr Val Lys Gly Val Leu Pro Tyr Trp Pro Arg Ile Phe Cys Lys
 100 105 110
 Ile Ser Leu Asp His Asp Arg Arg Val Arg Glu Ala Thr Gln Gln Ala
 115 120 125
 Phe Glu Lys Leu Ile Leu Lys Val Lys Lys Gln Leu Ala Pro Tyr Leu
 130 135 140
 Lys Ser Leu Met Gly Tyr Trp Leu Met Ala Gln Cys Asp Thr Tyr Thr
 145 150 155 160
 Pro Ala Ala Phe Ala Ala Lys Asp Ala Phe Glu Ala Ala Phe Pro Pro
 165 170 175
 Ser Lys Gln Pro Glu Ala Ile Ala Phe Cys Lys Asp Glu Ile Thr Ser
 180 185 190
 Val Leu Gln Asp His Leu Ile Lys Glu Thr Pro Asp Thr Leu Ser Asp
 195 200 205
 Pro Gln Thr Val Pro Glu Glu Glu Arg Glu Ala Lys Phe Tyr Arg Val
 210 215 220
 Val Thr Cys Ser Leu Leu Ala Leu Lys Arg Leu Leu Cys Leu Leu Pro
 225 230 235 240
 Asp Asn Glu Leu Asp Ser Leu Glu Glu Lys Phe Lys Ser Leu Leu Ser
 245 250 255
 Gln Asn Lys Phe Trp Lys Tyr Gly Lys His Ser Val Pro Gln Ile Arg
 260 265 270
 Ser Ala Tyr Phe Glu Leu Val Ser Ala Leu Cys Gln Arg Ile Pro Gln
 275 280 285
 Leu Met Lys Glu Glu Ala Ser Lys Val Ser Pro Ser Val Leu Leu Ser
 290 295 300
 Ile Asp Asp Ser Asp Pro Ile Val Cys Pro Ala Leu Trp Glu Ala Val
 305 310 315 320
 Leu Tyr Thr Leu Thr Thr Ile Glu Asp Cys Trp Leu His Val Asn Ala
 325 330 335
 Lys Lys Ser Val Phe Pro Lys Leu Ser Thr Val Ile Arg Glu Gly Gly
 340 345 350

Arg Gly Leu Ala Thr Val Ile Tyr Pro Tyr Leu Leu Pro Phe Ile Ser
 355 360 365
 Lys Leu Pro Gln Ser Ile Thr Asn Pro Lys Leu Asp Phe Phe Lys Asn
 370 375 380
 Phe Leu Thr Ser Leu Val Ala Gly Leu Ser Thr Glu Arg Thr Lys Thr
 385 390 395 400
 Ser Ser Leu Glu Ser Ser Ala Val Ile Ser Ala Phe Phe Glu Cys Leu
 405 410 415
 Arg Phe Ile Met Gln Gln Asn Leu Gly Glu Glu Glu Ile Glu Gln Met
 420 425 430
 Leu Val Asn Asp Gln Leu Ile Pro Phe Ile Asp Ala Val Leu Lys Asp
 435 440 445
 Pro Gly Leu Gln His Gly Gln Leu Phe Asn His Leu Ala Glu Thr Leu
 450 455 460
 Ser Ser Trp Glu Ala Lys Ala Asp Thr Glu Lys Asp Glu Lys Thr Ala
 465 470 475 480
 His Asn Leu Glu Asn Val Leu Ile His Phe Trp Glu Arg Leu Ser Glu
 485 490 495
 Ile Cys Val Ala Lys Ile Ser Glu Pro Glu Ala Asp Val Glu Ser Val
 500 505 510
 Leu Gly Val Ser Asn Leu Leu Gln Val Leu Gln Lys Pro Lys Ser Ser
 515 520 525
 Leu Lys Ser Ser Lys Lys Lys Asn Gly Lys Val Arg Phe Ala Asp Glu
 530 535 540
 Ile Leu Glu Ser Asn Lys Glu Asn Glu Lys Cys Val Ser Ser Glu Gly
 545 550 555 560
 Glu Lys Ile Glu Gly Trp Glu Leu Thr Thr Glu Pro Ser Leu Thr His
 565 570 575
 Asn Ser Ser Gly Leu Leu Ser Pro Leu Arg Lys Lys Pro Leu Glu Asp
 580 585 590
 Leu Val Cys Lys Leu Ala Asp Ile Ser Ile Asn Tyr Val Asn Glu Arg
 595 600 605
 Lys Ser Glu Gln His Leu Arg Phe Leu Ser Thr Leu Leu Asp Ser Phe
 610 615 620
 Ser Ser Ser Arg Val Phe Lys Met Leu Leu Gly Asp Glu Lys Gln Ser
 625 630 635 640

Ile Val Gln Ala Lys Pro Leu Glu Ile Ala Lys Leu Val Gln Lys Asn
 645 650 655
 Pro Ala Val Gln Phe Leu Tyr Gln Lys Leu Ile Gly Trp Leu Asn Glu
 660 665 670
 Asp Gln Arg Lys Asp Phe Gly Phe Leu Val Asp Ile Leu Tyr Ser Ala
 675 680 685
 Leu Arg Cys Cys Asp Asn Asp Met Glu Arg Lys Lys Val Leu Asp Asp
 690 695 700
 Leu Thr Lys Ala Cys Pro Ser Ser Asp Lys His Ala Leu Val Thr Pro
 705 710 715 720
 Trp Leu Lys Gly Asp Ile Leu Gly Glu Lys Leu Val Asn Leu Ala Asp
 725 730 735
 Cys Leu Cys Asn Glu Asp Leu Glu Ser Arg Val Ser Ser Glu Ser His
 740 745 750
 Phe Ser Glu Arg Trp Thr Leu Leu Ser Leu Val Leu Ser Gln His Val
 755 760 765
 Lys Asn Asp Tyr Leu Ile Gly Asp Val Tyr Val Glu Arg Ile Ile Val
 770 775 780
 Arg Leu His Glu Thr Leu Phe Lys Thr Lys Lys Leu Ser Glu Ala Glu
 785 790 795 800
 Ser Ser Asp Ser Ser Val Ser Phe Ile Cys Asp Val Ala Tyr Asn Tyr
 805 810 815
 Phe Ser Ser Ala Lys Gly Cys Leu Leu Met Pro Ser Ser Glu Asp Leu
 820 825 830
 Leu Leu Thr Leu Phe Gln Leu Cys Ala Gln Ser Lys Glu Lys Thr His
 835 840 845
 Leu Pro Asp Phe Leu Ile Cys Lys Leu Lys Asn Thr Trp Leu Ser Gly
 850 855 860
 Val Asn Leu Leu Val His Gln Thr Asp Ser Ser Tyr Lys Glu Ser Thr
 865 870 875 880
 Phe Leu His Leu Ser Ala Leu Trp Leu Lys Asn Gln Val Gln Ala Ser
 885 890 895
 Ser Leu Asp Ile Asn Ser Leu Gln Val Leu Leu Ser Ala Val Asp Asp
 900 905 910
 Leu Leu Asn Thr Leu Leu Glu Ser Glu Asp Ser Tyr Leu Met Gly Val
 915 920 925

Tyr Ile Gly Ser Val Met Pro Asn Asp Ser Glu Trp Glu Lys Met Arg
 930 935 940
 Gln Ser Leu Pro Met Gln Trp Leu His Arg Pro Leu Leu Glu Gly Arg
 945 950 955 960
 Leu Ser Leu Asn Tyr Glu Cys Phe Lys Thr Asp Phe Lys Glu Gln Asp
 965 970 975
 Ile Lys Thr Leu Pro Ser His Leu Cys Thr Ser Ala Leu Leu Ser Lys
 980 985 990
 Met Val Leu Ile Ala Leu Arg Lys Glu Thr Val Leu Glu Asn Asn Glu
 995 1000 1005
 Leu Glu Lys Ile Ile Ala Glu Leu Leu Tyr Ser Leu Gln Trp Cys Glu
 1010 1015 1020
 Glu Leu Asp Asn Pro Pro Ile Phe Leu Ile Gly Phe Cys Glu Ile Leu
 1025 1030 1035 1040
 Gln Lys Met Asn Ile Thr Tyr Asp Asn Leu Arg Val Leu Gly Asn Thr
 1045 1050 1055
 Ser Gly Leu Leu Gln Leu Leu Phe Asn Arg Ser Arg Glu His Gly Thr
 1060 1065 1070
 Leu Trp Ser Leu Ile Ile Ala Lys Leu Ile Leu Ser Arg Ser Ile Ser
 1075 1080 1085
 Ser Asp Glu Val Lys Pro His Tyr Lys Arg Lys Glu Ser Phe Phe Pro
 1090 1095 1100
 Leu Thr Glu Gly Asn Leu His Thr Ile Gln Ser Leu Cys Pro Phe Leu
 1105 1110 1115 1120
 Ser Lys Glu Glu Lys Lys Glu Phe Ser Ala Gln Cys Ile Pro Ala Leu
 1125 1130 1135
 Leu Gly Trp Thr Lys Lys Asp Leu Cys Ser Thr Asn Gly Gly Phe Gly
 1140 1145 1150
 His Leu Ala Ile Phe Asn Ser Cys Leu Gln Thr Lys Ser Ile Asp Asp
 1155 1160 1165
 Gly Glu Leu Leu His Gly Ile Leu Lys Ile Ile Ile Ser Trp Lys Lys
 1170 1175 1180
 Glu His Glu Asp Ile Phe Leu Phe Ser Cys Asn Leu Ser Glu Ala Ser
 1185 1190 1195 1200
 Pro Glu Val Leu Gly Val Asn Ile Glu Ile Ile Arg Phe Leu Ser Leu
 1205 1210 1215

Phe Leu Lys Tyr Cys Ser Ser Pro Leu Ala Glu Ser Glu Trp Asp Phe
 1220 1225 1230
 Ile Met Cys Ser Met Leu Ala Trp Leu Glu Thr Thr Ser Glu Asn Gln
 1235 1240 1245
 Ala Leu Tyr Ser Ile Pro Leu Val Gln Leu Phe Ala Cys Val Ser Cys
 1250 1255 1260
 Asp Leu Ala Cys Asp Leu Ser Ala Phe Phe Asp Ser Thr Thr Leu Asp
 1265 1270 1275 1280
 Thr Ile Gly Asn Leu Pro Val Asn Leu Ile Ser Glu Trp Lys Glu Phe
 1285 1290 1295
 Phe Ser Gln Gly Ile His Ser Leu Leu Leu Pro Ile Leu Val Thr Val
 1300 1305 1310
 Thr Gly Glu Asn Lys Asp Val Ser Glu Thr Ser Phe Gln Asn Ala Met
 1315 1320 1325
 Leu Lys Pro Met Cys Glu Thr Leu Thr Tyr Ile Ser Lys Glu Gln Leu
 1330 1335 1340
 Leu Ser His Lys Leu Pro Ala Arg Leu Val Ala Asp Gln Lys Thr Asn
 1345 1350 1355 1360
 Leu Pro Glu Tyr Leu Gln Thr Leu Leu Asn Thr Leu Ala Pro Leu Leu
 1365 1370 1375
 Leu Phe Arg Ala Arg Pro Val Gln Ile Ala Val Tyr His Met Leu Tyr
 1380 1385 1390
 Lys Leu Met Pro Glu Leu Pro Gln Tyr Asp Gln Asp Asn Leu Lys Ser
 1395 1400 1405
 Tyr Gly Asp Glu Glu Glu Glu Pro Ala Leu Ser Pro Pro Ala Ala Leu
 1410 1415 1420
 Met Ser Leu Leu Ser Ile Gln Glu Asp Leu Leu Glu Asn Val Leu Gly
 1425 1430 1435 1440
 Cys Ile Pro Val Gly Gln Ile Val Thr Ile Lys Pro Leu Ser Glu Asp
 1445 1450 1455
 Phe Cys Tyr Val Leu Gly Tyr Leu Leu Thr Trp Lys Leu Ile Leu Thr
 1460 1465 1470
 Phe Phe Lys Ala Ala Ser Ser Gln Leu Arg Ala Leu Tyr Ser Met Tyr
 1475 1480 1485
 Leu Arg Lys Thr Lys Ser Leu Asn Lys Leu Leu Tyr His Leu Phe Arg
 1490 1495 1500

Leu Met Pro Glu Asn Pro Thr Tyr Ala Glu Thr Ala Val Glu Val Pro
 1505 1510 1515 1520
 Asn Lys Asp Pro Lys Thr Phe Phe Thr Glu Glu Leu Gln Leu Ser Ile
 1525 1530 1535
 Arg Glu Thr Thr Met Leu Pro Tyr His Ile Pro His Leu Ala Cys Ser
 1540 1545 1550
 Val Tyr His Met Thr Leu Lys Asp Leu Pro Ala Met Val Arg Leu Trp
 1555 1560 1565
 Trp Asn Ser Ser Glu Lys Arg Val Phe Asn Ile Val Asp Arg Phe Thr
 1570 1575 1580
 Ser Lys Tyr Val Ser Ser Val Leu Ser Phe Gln Glu Ile Ser Ser Val
 1585 1590 1595 1600
 Gln Thr Ser Thr Gln Leu Phe Asn Gly Met Thr Val Lys Ala Arg Ala
 1605 1610 1615
 Thr Thr Arg Glu Val Met Ala Thr Tyr Thr Ile Glu Asp Ile Val Ile
 1620 1625 1630
 Glu Leu Ile Ile Gln Leu Pro Ser Asn Tyr Pro Leu Gly Ser Ile Ile
 1635 1640 1645
 Val Glu Ser Gly Lys Arg Val Gly Val Ala Val Gln Gln Trp Arg Asn
 1650 1655 1660
 Trp Met Leu Gln Leu Ser Thr Tyr Leu Thr His Gln Asn Gly Ser Ile
 1665 1670 1675 1680
 Met Glu Gly Leu Ala Leu Trp Lys Asn Asn Val Asp Lys Arg Phe Glu
 1685 1690 1695
 Gly Val Glu Asp Cys Met Ile Cys Phe Ser Val Ile His Gly Phe Asn
 1700 1705 1710
 Tyr Ser Leu Pro Lys Lys Ala Cys Arg Thr Cys Lys Lys Lys Phe His
 1715 1720 1725
 Ser Ala Cys Leu Tyr Lys Trp Phe Thr Ser Ser Asn Lys Ser Thr Cys
 1730 1735 1740
 Pro Leu Cys Arg Glu Thr Phe Phe
 1745 1750

<210> 7

<211> 1767

<212> PRT

<213> Mus musculus

<400> 7

Met	Gly	Gly	Lys	Asn	Lys	Gln	Arg	Thr	Lys	Gly	Asn	Leu	Arg	Pro	Ser
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Asn	Ser	Gly	Arg	Ala	Ala	Glu	Leu	Leu	Ala	Lys	Glu	Gln	Gly	Thr	Val
			20					25					30		
Pro	Gly	Phe	Ile	Gly	Phe	Gly	Thr	Ser	His	Ser	Asp	Leu	Gly	Tyr	Val
		35					40					45			
Pro	Ala	Val	Gln	Gly	Ala	Glu	Asp	Ile	Asp	Ser	Leu	Val	Asp	Ser	Asp
		50				55					60				
Phe	Arg	Met	Val	Leu	Arg	Lys	Leu	Ser	Lys	Lys	Asp	Val	Thr	Thr	Lys
65					70					75					80
Leu	Lys	Ala	Met	Gln	Glu	Phe	Gly	Ile	Met	Cys	Thr	Glu	Arg	Asp	Thr
				85					90					95	
Glu	Ala	Val	Lys	Gly	Val	Leu	Pro	Tyr	Trp	Pro	Arg	Ile	Phe	Cys	Lys
			100					105					110		
Ile	Ser	Leu	Asp	His	Asp	Arg	Arg	Val	Arg	Glu	Ala	Thr	Gln	Gln	Ala
		115					120					125			
Phe	Glu	Lys	Leu	Ile	Leu	Lys	Val	Lys	Lys	His	Leu	Ala	Pro	Tyr	Leu
	130					135					140				
Lys	Ser	Val	Met	Gly	Tyr	Trp	Leu	Met	Ala	Gln	Cys	Asp	Thr	Tyr	Pro
145					150					155					160
Pro	Ala	Ala	Leu	Ala	Ala	Lys	Asp	Ala	Phe	Glu	Ala	Ala	Phe	Pro	Pro
			165						170					175	
Ser	Lys	Gln	Pro	Glu	Ala	Ile	Ala	Phe	Cys	Lys	Glu	Glu	Ile	Thr	Thr
			180					185					190		
Val	Leu	Gln	Asp	His	Leu	Leu	Lys	Glu	Thr	Pro	Asp	Thr	Leu	Ser	Asp
	195						200					205			
Pro	Gln	Thr	Val	Pro	Glu	Glu	Glu	Arg	Glu	Ala	Lys	Phe	His	Arg	Val
	210					215					220				
Val	Thr	Cys	Ser	Leu	Leu	Ala	Leu	Lys	Arg	Leu	Leu	Cys	Phe	Leu	Pro
225					230					235					240
Asn	Asn	Glu	Leu	Asp	Ser	Leu	Glu	Glu	Lys	Phe	Lys	Ser	Leu	Leu	Ser
			245						250					255	
Gln	Asn	Lys	Phe	Trp	Lys	Tyr	Gly	Lys	His	Ser	Val	Pro	Gln	Val	Arg
		260					265						270		

Ser Ala Tyr Phe Glu Leu Val Ser Ala Leu Cys Gln His Val Pro Gln
 275 280 285
 Val Met Lys Glu Glu Ala Ala Lys Val Ser Pro Ser Val Leu Leu Ser
 290 295 300
 Ile Asp Asp Ser Asp Pro Val Val Cys Pro Ala Leu Trp Glu Ala Val
 305 310 315 320
 Leu Tyr Thr Leu Thr Thr Ile Glu Asp Cys Trp Phe His Val Asn Ala
 325 330 335
 Lys Lys Ser Val Phe Pro Lys Leu Met Ala Met Ile Arg Glu Gly Gly
 340 345 350
 Arg Gly Leu Ala Ala Val Met Tyr Pro Tyr Leu Leu Pro Phe Ile Ser
 355 360 365
 Lys Leu Pro Gln Ser Ile Thr Glu Pro Lys Leu Asp Phe Phe Lys Asn
 370 375 380
 Phe Leu Thr Ser Leu Val Thr Gly Leu Ser Thr Glu Arg Thr Lys Ser
 385 390 395 400
 Ser Ser Ser Glu Cys Ser Ala Val Ile Pro Ala Phe Phe Glu Cys Leu
 405 410 415
 Arg Phe Ile Met Gln Gln Asn Leu Gly Glu Glu Glu Met Val Gln Met
 420 425 430
 Leu Ile Asn Glu Gln Leu Ile Pro Phe Ile Asp Thr Val Leu Lys Asp
 435 440 445
 Ser Gly Leu His His Gly Pro Met Phe Asp His Leu Ala Asp Thr Leu
 450 455 460
 Ser Ser Trp Glu Ala Lys Ala Asp Ala Glu Arg Asp Pro Gly Ala Val
 465 470 475 480
 Tyr Asn Leu Glu Asn Val Leu Leu Ser Phe Trp Gly Arg Leu Ser Glu
 485 490 495
 Ile Cys Thr Glu Lys Ile Arg Gln Pro Glu Ala Asp Val Lys Ser Val
 500 505 510
 Leu Cys Val Ser Ser Leu Val Gly Val Leu Gln Arg Pro Arg Ser Ser
 515 520 525
 Leu Glu Leu His Arg Lys Lys Thr Ala Gln Val Arg Phe Ala Ile Asn
 530 535 540
 Ile Pro Glu Ala His Lys Gly Asp Glu Lys Ser Met Ser Ser Glu Gly
 545 550 555 560

Glu Asn Ser Glu Gly Ser Asp Gly Gly Ala Gln Ser Pro Leu Ser Asn
 565 570 575
 Thr Ser Ser Asp Leu Val Ser Pro Leu Arg Lys Lys Pro Leu Glu Asp
 580 585 590
 Leu Val Cys Lys Leu Ala Glu Val Ser Ile Ser Phe Val Asn Glu Arg
 595 600 605
 Lys Ser Glu Gln His Leu Gln Phe Leu Ser Thr Leu Leu Asp Ser Phe
 610 615 620
 Ser Ser Val Gln Val Phe Asn Ile Leu Leu Ser Asp Lys Gln Lys Asn
 625 630 635 640
 Val Val Lys Ala Lys Pro Leu Glu Ile Thr Lys Leu Ala Glu Lys Asn
 645 650 655
 Pro Ala Val Lys Phe Leu Tyr His Lys Leu Ile Gly Trp Leu Asn Asp
 660 665 670
 Ser Gln Lys Glu Asp Gly Gly Phe Leu Val Asp Ile Leu Tyr Ser Ala
 675 680 685
 Leu Arg Cys Cys Asp Ser Gly Val Glu Arg Lys Glu Val Leu Asp Asp
 690 695 700
 Leu Thr Lys Glu Asp Leu Lys Trp Ser Ser Leu Leu Gln Val Ile Glu
 705 710 715 720
 Lys Ala Cys Ser Ser Ser Asp Lys His Ala Leu Val Thr Pro Trp Leu
 725 730 735
 Lys Gly Ser Ile Leu Gly Glu Lys Leu Val Ala Leu Ala Asp Cys Leu
 740 745 750
 Cys Asp Lys Asp Leu Glu Ala Thr Thr Ser Glu Ser His Ser Ser Glu
 755 760 765
 Gln Trp Ser Leu Leu Arg Leu Ala Leu Ser Gln His Val Lys Asn Asp
 770 775 780
 Tyr Leu Ile Gly Glu Val Tyr Val Gly Arg Ile Ile Val Lys Leu His
 785 790 795 800
 Glu Thr Leu Ser Lys Thr Lys Asp Leu Ser Glu Ala Ala Asn Ser Asp
 805 810 815
 Ser Ser Val Ser Phe Val Cys Asp Val Val His Ser Phe Phe Ser Ser
 820 825 830
 Ala Gly Gly Gly Leu Leu Met Pro Pro Ser Glu Asp Leu Leu Leu Thr
 835 840 845

Leu Phe Gln Leu Cys Ala Gln Ser Lys Glu Arg Thr His Leu Pro Asp
 850 855 860
 Phe Leu Ile Cys Lys Leu Lys Asn Thr Leu Leu Ser Gly Val Asn Leu
 865 870 875 880
 Leu Val His Gln Thr Ala Ser Thr Tyr Glu Gln Ser Thr Phe Leu Arg
 885 890 895
 Leu Ser Val Leu Trp Leu Lys Asp Gln Val Gln Ser Ser Ala Leu Asp
 900 905 910
 Asn Thr Ser Leu Gln Val Leu Leu Ser Ala Ala Gly Asp Leu Leu Gly
 915 920 925
 Thr Leu Val Glu Ser Glu Asp Thr Ser Leu Leu Gly Val Tyr Ile Gly
 930 935 940
 Ser Val Met Pro Ser Asp Ser Glu Trp Glu Lys Met Arg Gln Ala Leu
 945 950 955 960
 Pro Val Gln Trp Leu His Arg Pro Leu Leu Glu Gly Arg Leu Ser Leu
 965 970 975
 Asn Tyr Glu Cys Phe Lys Thr Asp Phe Lys Glu Gln Asp Thr Lys Thr
 980 985 990
 Leu Pro Asn His Leu Cys Thr Ser Ser Leu Leu Ser Lys Met Ile Leu
 995 1000 1005
 Val Ala Gln Lys Lys Lys Leu Val Leu Glu Asp Asn Val Leu Glu Lys
 1010 1015 1020
 Ile Ile Ala Glu Leu Leu Tyr Ser Leu Gln Trp Cys Glu Glu Leu Asp
 1025 1030 1035 1040
 Asn Ala Pro Ser Phe Leu Ser Gly Phe Cys Gly Ile Leu Gln Lys Met
 1045 1050 1055
 Asn Ile Thr Tyr Ser Asn Leu Ser Val Leu Ser Glu Thr Ser Ser Leu
 1060 1065 1070
 Leu Gln Leu Leu Phe Asp Arg Ser Arg Lys Asn Gly Thr Leu Trp Ser
 1075 1080 1085
 Leu Ile Ile Ala Lys Leu Ile Leu Ser Arg Ser Ile Ser Ser Asp Glu
 1090 1095 1100
 Val Lys Pro Tyr Tyr Lys Arg Lys Glu Ser Phe Phe Pro Leu Thr Glu
 1105 1110 1115 1120
 Gly Ser Leu His Thr Ile Gln Ser Leu Cys Pro Phe Leu Ser Lys Glu
 1125 1130 1135

Glu Lys Lys Glu Phe Ser Ala His Ser Ile Pro Ala Phe Leu Gly Trp
 1140 1145 1150
 Thr Lys Glu Asp Leu Cys Ser Ile Asn Gly Ala Phe Gly His Leu Ala
 1155 1160 1165
 Ile Phe Asn Ser Cys Leu Gln Thr Arg Ser Ile Asp Asp Lys Gln Leu
 1170 1175 1180
 Leu His Gly Ile Leu Lys Ile Ile Thr Ser Trp Arg Lys Gln His Glu
 1185 1190 1195 1200
 Asp Ile Phe Leu Phe Ser Cys Asn Leu Ser Glu Ala Ser Pro Glu Val
 1205 1210 1215
 Leu Gly Leu Asn Ile Glu Ile Met Arg Phe Leu Ser Leu Phe Leu Lys
 1220 1225 1230
 His Cys Ala Tyr Pro Leu Pro Leu Ala Asp Ser Glu Trp Asp Phe Ile
 1235 1240 1245
 Met Cys Ser Met Leu Ala Trp Leu Glu Thr Thr Ser Glu Asn Gln Ala
 1250 1255 1260
 Leu Tyr Ser Val Pro Leu Val Gln Leu Phe Ala Cys Val Ser Phe Asp
 1265 1270 1275 1280
 Leu Ala Cys Asp Leu Cys Ala Phe Phe Asp Ser Ile Thr Pro Asp Ile
 1285 1290 1295
 Val Asp Asn Leu Pro Val Asn Leu Ile Ser Glu Trp Lys Glu Phe Phe
 1300 1305 1310
 Ser Lys Gly Ile His Ser Leu Leu Leu Pro Leu Leu Val Asn Ala Ile
 1315 1320 1325
 Gly Glu Asn Lys Asp Leu Ser Glu Thr Ser Phe Gln Asn Ala Met Leu
 1330 1335 1340
 Lys Pro Met Cys Glu Thr Leu Thr Tyr Ile Ser Lys Asp Gln Leu Leu
 1345 1350 1355 1360
 Ser His Lys Leu Pro Ala Arg Leu Val Ala Ser Gln Lys Thr Asn Leu
 1365 1370 1375
 Pro Glu His Leu Gln Thr Leu Leu Asn Thr Leu Thr Pro Leu Leu Leu
 1380 1385 1390
 Phe Arg Ala Arg Pro Val Gln Ile Ala Ala Tyr His Met Leu Cys Lys
 1395 1400 1405
 Leu Met Pro Glu Leu Pro Gln His Asp Gln Asp Asn Leu Arg Ser Tyr
 1410 1415 1420

Gly Asp Glu Glu Glu Glu Pro Ala Leu Ser Pro Pro Ala Ala Leu Met
 1425 1430 1435 1440
 Ser Leu Leu Ser Ser Gln Glu Glu Leu Leu Glu Asn Val Leu Gly Cys
 1445 1450 1455
 Val Pro Val Gly Gln Ile Val Thr Val Lys Pro Leu Ser Glu Asp Phe
 1460 1465 1470
 Cys Tyr Val Leu Gly Tyr Leu Leu Thr Trp Lys Leu Ile Leu Thr Phe
 1475 1480 1485
 Phe Lys Ala Ala Ser Ser Gln Leu Arg Ala Leu Tyr Ser Met Tyr Leu
 1490 1495 1500
 Arg Lys Thr Lys Ser Leu Asn Lys Leu Leu Tyr His Leu Phe Arg Leu
 1505 1510 1515 1520
 Met Pro Glu Asn Pro Thr Tyr Gly Glu Thr Ala Ile Glu Val Ser Ser
 1525 1530 1535
 Lys Asp Pro Lys Thr Phe Phe Thr Glu Glu Val Gln Leu Ser Ile Arg
 1540 1545 1550
 Glu Thr Ala Thr Leu Pro Tyr His Ile Pro His Leu Ala Cys Ser Val
 1555 1560 1565
 Tyr His Met Thr Leu Lys Asp Leu Pro Ala Met Val Arg Leu Trp Trp
 1570 1575 1580
 Asn Ser Ser Glu Lys Arg Val Phe Asn Ile Val Asp Arg Phe Thr Ser
 1585 1590 1595 1600
 Lys Tyr Val Ser Asn Val Leu Ser Phe Gln Glu Ile Ser Ser Val Gln
 1605 1610 1615
 Thr Ser Thr Gln Leu Phe Asn Gly Met Thr Val Lys Ala Arg Ala Thr
 1620 1625 1630
 Thr Arg Glu Val Met Ala Thr Tyr Thr Ile Glu Asp Ile Val Ile Glu
 1635 1640 1645
 Leu Ile Ile Gln Leu Pro Ser Asn Tyr Pro Leu Gly Ser Ile Thr Val
 1650 1655 1660
 Glu Ser Gly Lys Arg Ile Gly Val Ala Val Gln Gln Trp Arg Asn Trp
 1665 1670 1675 1680
 Met Leu Gln Leu Ser Thr Tyr Leu Thr His Gln Asn Gly Ser Ile Met
 1685 1690 1695
 Glu Gly Leu Ala Leu Trp Lys Asn Asn Val Asp Lys Arg Phe Glu Gly
 1700 1705 1710

Val Glu Asp Cys Met Ile Cys Phe Ser Val Ile His Gly Phe Asn Tyr
 1715 1720 1725

Ser Leu Pro Lys Lys Ala Cys Arg Thr Cys Lys Lys Lys Phe His Ser
 1730 1735 1740

Ala Cys Leu Tyr Lys Trp Phe Thr Ser Ser Asn Lys Ser Thr Cys Pro
 1745 1750 1755 1760

Leu Cys Arg Glu Thr Phe Phe
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<210> 8

<211> 1766

<212> PRT

<213> Homo sapiens

<400> 8

Met Gly Gly Lys Asn Lys Gln Arg Thr Lys Gly Asn Leu Arg Pro Ser
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Asn Ser Gly Arg Ala Ala Glu Leu Leu Ala Lys Glu Gln Gly Thr Val
 20 25 30

Pro Gly Phe Ile Gly Phe Gly Thr Ser Gln Ser Asp Leu Gly Tyr Val
 35 40 45

Pro Ala Ile Gln Gly Ala Glu Glu Ile Asp Ser Leu Val Asp Ser Asp
 50 55 60

Phe Arg Met Val Leu Arg Lys Leu Ser Lys Lys Asp Val Thr Thr Lys
 65 70 75 80

Leu Lys Ala Met Gln Glu Phe Gly Thr Met Cys Thr Glu Arg Asp Thr
 85 90 95

Glu Thr Val Lys Gly Val Leu Pro Tyr Trp Pro Arg Ile Phe Cys Lys
 100 105 110

Ile Ser Leu Asp His Asp Arg Arg Val Arg Glu Ala Thr Gln Gln Ala
 115 120 125

Phe Glu Lys Leu Ile Leu Lys Val Lys Lys Gln Leu Ala Pro Tyr Leu
 130 135 140

Lys Ser Leu Met Gly Tyr Trp Leu Met Ala Gln Cys Asp Thr Tyr Thr
 145 150 155 160

Pro Ala Ala Phe Ala Ala Lys Asp Ala Phe Glu Ala Ala Phe Pro Pro
 165 170 175

Ser Lys Gln Pro Glu Ala Ile Ala Phe Cys Lys Asp Glu Ile Thr Ser
 180 185 190

Val Leu Gln Asp His Leu Ile Lys Glu Thr Pro Asp Thr Leu Ser Asp
 195 200 205
 Pro Gln Thr Val Pro Glu Glu Glu Arg Glu Ala Lys Phe Tyr Arg Val
 210 215 220
 Val Thr Cys Ser Leu Leu Ala Leu Lys Arg Leu Leu Cys Leu Leu Pro
 225 230 235 240
 Asp Asn Glu Leu Asp Ser Leu Glu Glu Lys Phe Lys Ser Leu Leu Ser
 245 250 255
 Gln Asn Lys Phe Trp Lys Tyr Gly Lys His Ser Val Pro Gln Ile Arg
 260 265 270
 Ser Ala Tyr Phe Glu Leu Val Ser Ala Leu Cys Gln Arg Ile Pro Gln
 275 280 285
 Leu Met Lys Glu Glu Ala Ser Lys Val Ser Pro Ser Val Leu Leu Ser
 290 295 300
 Ile Asp Asp Ser Asp Pro Ile Val Cys Pro Ala Leu Trp Glu Ala Val
 305 310 315 320
 Leu Tyr Thr Leu Thr Thr Ile Glu Asp Cys Trp Leu His Val Asn Ala
 325 330 335
 Lys Lys Ser Val Phe Pro Lys Leu Ser Thr Val Ile Arg Glu Gly Gly
 340 345 350
 Arg Gly Leu Ala Thr Val Ile Tyr Pro Tyr Leu Leu Pro Phe Ile Ser
 355 360 365
 Lys Leu Pro Gln Ser Ile Thr Asn Pro Lys Leu Asp Phe Phe Lys Asn
 370 375 380
 Phe Leu Thr Ser Leu Val Ala Gly Leu Ser Thr Glu Arg Thr Lys Thr
 385 390 395 400
 Ser Ser Leu Glu Ser Ser Ala Val Ile Ser Ala Phe Phe Glu Cys Leu
 405 410 415
 Arg Phe Ile Met Gln Gln Asn Leu Gly Glu Glu Glu Ile Glu Gln Met
 420 425 430
 Leu Val Asn Asp Gln Leu Ile Pro Phe Ile Asp Ala Val Leu Lys Asp
 435 440 445
 Pro Gly Leu Gln His Gly Gln Leu Phe Asn His Leu Ala Glu Thr Leu
 450 455 460
 Ser Ser Trp Glu Ala Lys Ala Asp Thr Glu Lys Asp Glu Lys Thr Ala
 465 470 475 480

His Asn Leu Glu Asn Val Leu Ile His Phe Trp Glu Arg Leu Ser Glu
 485 490 495
 Ile Cys Val Ala Lys Ile Ser Glu Pro Glu Ala Asp Val Glu Ser Val
 500 505 510
 Leu Gly Val Ser Asn Leu Leu Gln Val Leu Gln Lys Pro Lys Ser Ser
 515 520 525
 Leu Lys Ser Ser Lys Lys Lys Asn Gly Lys Val Arg Phe Ala Asp Glu
 530 535 540
 Ile Leu Glu Ser Asn Lys Glu Asn Glu Lys Cys Val Ser Ser Glu Gly
 545 550 555 560
 Glu Lys Ile Glu Gly Trp Glu Leu Thr Thr Glu Pro Ser Leu Thr His
 565 570 575
 Asn Ser Ser Gly Leu Leu Ser Pro Leu Arg Lys Lys Pro Leu Glu Asp
 580 585 590
 Leu Val Cys Lys Leu Ala Asp Ile Ser Ile Asn Tyr Val Asn Glu Arg
 595 600 605
 Lys Ser Glu Gln His Leu Arg Phe Leu Ser Thr Leu Leu Asp Ser Phe
 610 615 620
 Ser Ser Ser Arg Val Phe Lys Met Leu Leu Gly Asp Glu Lys Gln Ser
 625 630 635 640
 Ile Val Gln Ala Lys Pro Leu Glu Ile Ala Lys Leu Val Gln Lys Asn
 645 650 655
 Pro Ala Val Gln Phe Leu Tyr Gln Lys Leu Ile Gly Trp Leu Asn Glu
 660 665 670
 Asp Gln Arg Lys Asp Phe Gly Phe Leu Val Asp Ile Leu Tyr Ser Ala
 675 680 685
 Leu Arg Cys Cys Asp Asn Asp Met Glu Arg Lys Lys Val Leu Asp Asp
 690 695 700
 Leu Thr Lys Val Asp Leu Lys Trp Asn Ser Leu Leu Lys Ile Ile Glu
 705 710 715 720
 Lys Ala Cys Pro Ser Ser Asp Lys His Ala Leu Val Thr Pro Trp Leu
 725 730 735
 Lys Gly Asp Ile Leu Gly Glu Lys Leu Val Asn Leu Ala Asp Cys Leu
 740 745 750
 Cys Asn Glu Asp Leu Glu Ser Arg Val Ser Ser Glu Ser His Phe Ser
 755 760 765

Glu Arg Trp Thr Leu Leu Ser Leu Val Leu Ser Gln His Val Lys Asn
 770 775 780
 Asp Tyr Leu Ile Gly Asp Val Tyr Val Glu Arg Ile Ile Val Arg Leu
 785 790 795 800
 His Glu Thr Leu Phe Lys Thr Lys Lys Leu Ser Glu Ala Glu Ser Ser
 805 810 815
 Asp Ser Ser Val Ser Phe Ile Cys Asp Val Ala Tyr Asn Tyr Phe Ser
 820 825 830
 Ser Ala Lys Gly Cys Leu Leu Met Pro Ser Ser Glu Asp Leu Leu Leu
 835 840 845
 Thr Leu Phe Gln Leu Cys Ala Gln Ser Lys Glu Lys Thr His Leu Pro
 850 855 860
 Asp Phe Leu Ile Cys Lys Leu Lys Asn Thr Trp Leu Ser Gly Val Asn
 865 870 875 880
 Leu Leu Val His Gln Thr Asp Ser Ser Tyr Lys Glu Ser Thr Phe Leu
 885 890 895
 His Leu Ser Ala Leu Trp Leu Lys Asn Gln Val Gln Ala Ser Ser Leu
 900 905 910
 Asp Ile Asn Ser Leu Gln Val Leu Leu Ser Ala Val Asp Asp Leu Leu
 915 920 925
 Asn Thr Leu Leu Glu Ser Glu Asp Ser Tyr Leu Met Gly Val Tyr Ile
 930 935 940
 Gly Ser Val Met Pro Asn Asp Ser Glu Trp Glu Lys Met Arg Gln Ser
 945 950 955 960
 Leu Pro Met Gln Trp Leu His Arg Pro Leu Leu Glu Gly Arg Leu Ser
 965 970 975
 Leu Asn Tyr Glu Cys Phe Lys Thr Asp Phe Lys Glu Gln Asp Ile Lys
 980 985 990
 Thr Leu Pro Ser His Leu Cys Thr Ser Ala Leu Leu Ser Lys Met Val
 995 1000 1005
 Leu Ile Ala Leu Arg Lys Glu Thr Val Leu Glu Asn Asn Glu Leu Glu
 1010 1015 1020
 Lys Ile Ile Ala Glu Leu Leu Tyr Ser Leu Gln Trp Cys Glu Glu Leu
 1025 1030 1035 1040
 Asp Asn Pro Pro Ile Phe Leu Ile Gly Phe Cys Glu Ile Leu Gln Lys
 1045 1050 1055

Met Asn Ile Thr Tyr Asp Asn Leu Arg Val Leu Gly Asn Thr Ser Gly
 1060 1065 1070
 Leu Leu Gln Leu Leu Phe Asn Arg Ser Arg Glu His Gly Thr Leu Trp
 1075 1080 1085
 Ser Leu Ile Ile Ala Lys Leu Ile Leu Ser Arg Ser Ile Ser Ser Asp
 1090 1095 1100
 Glu Val Lys Pro His Tyr Lys Arg Lys Glu Ser Phe Phe Pro Leu Thr
 1105 1110 1115 1120
 Glu Gly Asn Leu His Thr Ile Gln Ser Leu Cys Pro Phe Leu Ser Lys
 1125 1130 1135
 Glu Glu Lys Lys Glu Phe Ser Ala Gln Cys Ile Pro Ala Leu Leu Gly
 1140 1145 1150
 Trp Thr Lys Lys Asp Leu Cys Ser Thr Asn Gly Gly Phe Gly His Leu
 1155 1160 1165
 Ala Ile Phe Asn Ser Cys Leu Gln Thr Lys Ser Ile Asp Asp Gly Glu
 1170 1175 1180
 Leu Leu His Gly Ile Leu Lys Ile Ile Ile Ser Trp Lys Lys Glu His
 1185 1190 1195 1200
 Glu Asp Ile Phe Leu Phe Ser Cys Asn Leu Ser Glu Ala Ser Pro Glu
 1205 1210 1215
 Val Leu Gly Val Asn Ile Glu Ile Ile Arg Phe Leu Ser Leu Phe Leu
 1220 1225 1230
 Lys Tyr Cys Ser Ser Pro Leu Ala Glu Ser Glu Trp Asp Phe Ile Met
 1235 1240 1245
 Cys Ser Met Leu Ala Trp Leu Glu Thr Thr Ser Glu Asn Gln Ala Leu
 1250 1255 1260
 Tyr Ser Ile Pro Leu Val Gln Leu Phe Ala Cys Val Ser Cys Asp Leu
 1265 1270 1275 1280
 Ala Cys Asp Leu Ser Ala Phe Phe Asp Ser Thr Thr Leu Asp Thr Ile
 1285 1290 1295
 Gly Asn Leu Pro Val Asn Leu Ile Ser Glu Trp Lys Glu Phe Phe Ser
 1300 1305 1310
 Gln Gly Ile His Ser Leu Leu Leu Pro Ile Leu Val Thr Val Thr Gly
 1315 1320 1325
 Glu Asn Lys Asp Val Ser Glu Thr Ser Phe Gln Asn Ala Met Leu Lys
 1330 1335 1340

Pro Met Cys Glu Thr Leu Thr Tyr Ile Ser Lys Glu Gln Leu Leu Ser
 1345 1350 1355 1360
 His Lys Leu Pro Ala Arg Leu Val Ala Asp Gln Lys Thr Asn Leu Pro
 1365 1370 1375
 Glu Tyr Leu Gln Thr Leu Leu Asn Thr Leu Ala Pro Leu Leu Leu Phe
 1380 1385 1390
 Arg Ala Arg Pro Val Gln Ile Ala Val Tyr His Met Leu Tyr Lys Leu
 1395 1400 1405
 Met Pro Glu Leu Pro Gln Tyr Asp Gln Asp Asn Leu Lys Ser Tyr Gly
 1410 1415 1420
 Asp Glu Glu Glu Glu Pro Ala Leu Ser Pro Pro Ala Ala Leu Met Ser
 1425 1430 1435 1440
 Leu Leu Ser Ile Gln Glu Asp Leu Leu Glu Asn Val Leu Gly Cys Ile
 1445 1450 1455
 Pro Val Gly Gln Ile Val Thr Ile Lys Pro Leu Ser Glu Asp Phe Cys
 1460 1465 1470
 Tyr Val Leu Gly Tyr Leu Leu Thr Trp Lys Leu Ile Leu Thr Phe Phe
 1475 1480 1485
 Lys Ala Ala Ser Ser Gln Leu Arg Ala Leu Tyr Ser Met Tyr Leu Arg
 1490 1495 1500
 Lys Thr Lys Ser Leu Asn Lys Leu Leu Tyr His Leu Phe Arg Leu Met
 1505 1510 1515 1520
 Pro Glu Asn Pro Thr Tyr Ala Glu Thr Ala Val Glu Val Pro Asn Lys
 1525 1530 1535
 Asp Pro Lys Thr Phe Phe Thr Glu Glu Leu Gln Leu Ser Ile Arg Glu
 1540 1545 1550
 Thr Thr Met Leu Pro Tyr His Ile Pro His Leu Ala Cys Ser Val Tyr
 1555 1560 1565
 His Met Thr Leu Lys Asp Leu Pro Ala Met Val Arg Leu Trp Trp Asn
 1570 1575 1580
 Ser Ser Glu Lys Arg Val Phe Asn Ile Val Asp Arg Phe Thr Ser Lys
 1585 1590 1595 1600
 Tyr Val Ser Ser Val Leu Ser Phe Gln Glu Ile Ser Ser Val Gln Thr
 1605 1610 1615
 Ser Thr Gln Leu Phe Asn Gly Met Thr Val Lys Ala Arg Ala Thr Thr
 1620 1625 1630

Arg Glu Val Met Ala Thr Tyr Thr Ile Glu Asp Ile Val Ile Glu Leu
 1635 1640 1645
 Ile Ile Gln Leu Pro Ser Asn Tyr Pro Leu Gly Ser Ile Ile Val Glu
 1650 1655 1660
 Ser Gly Lys Arg Val Gly Val Ala Val Gln Gln Trp Arg Asn Trp Met
 1665 1670 1675 1680
 Leu Gln Leu Ser Thr Tyr Leu Thr His Gln Asn Gly Ser Ile Met Glu
 1685 1690 1695
 Gly Leu Ala Leu Trp Lys Asn Asn Val Asp Lys Arg Phe Glu Gly Val
 1700 1705 1710
 Glu Asp Cys Met Ile Cys Phe Ser Val Ile His Gly Phe Asn Tyr Ser
 1715 1720 1725
 Leu Pro Lys Lys Ala Cys Arg Thr Cys Lys Lys Lys Phe His Ser Ala
 1730 1735 1740
 Cys Leu Tyr Lys Trp Phe Thr Ser Ser Asn Lys Ser Thr Cys Pro Leu
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 Cys Arg Glu Thr Phe Phe
 1765

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 <212> PRT
 <213> *Drosophila melanogaster*

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 Ile Phe Val Gly Phe Ser Ala Gln Thr Asp Gly Gly Gly Leu Val Pro
 35 40 45
 Phe Ala Pro Gly Phe Ala Ser Ala Glu Gln Met Pro Asp Ser Phe Asp
 50 55 60
 Ala Ala Ile Ser Pro Gln Thr Gln Ile Ile Leu Arg Lys Leu Ser Lys
 65 70 75 80
 Lys Asp Pro Met Thr Lys Lys Lys Ala Leu Gln Glu Leu His Glu Leu
 85 90 95

Ile Glu Gln Ser Asp Val Glu Val Leu Lys Asn Ile Leu Pro Leu Trp
 100 105 110
 Pro Lys Tyr Tyr Leu Asn Leu Ala Ser Asp Pro Glu His Thr Val Arg
 115 120 125
 Glu Gln Thr Gln Thr Val Leu Gln Leu Leu Met Ala Lys Cys Lys Lys
 130 135 140
 Ala Met Ala Pro Tyr Leu Lys Leu Leu Val Pro Val Trp Leu Gly Ser
 145 150 155 160
 Arg Phe Asp Thr Tyr Ala Pro Ala Ala Ser Ile Ala Ser Gln Ser Phe
 165 170 175
 Arg Asp Thr Phe Ala Gly Asn Ala Asn Arg Ser Arg Glu Val Cys Met
 180 185 190
 His Cys Gln Val Glu Ile Leu Glu Tyr Ala Thr Arg Asn Leu Thr Phe
 195 200 205
 His Thr Ala Ala Thr Leu Ser Ile Gly Lys Ser Leu Thr Pro Glu Asp
 210 215 220
 Ala Glu Gln Lys Tyr Gln Arg Val Ile Ile Ser Ser Leu Lys Leu Leu
 225 230 235 240
 Ser Phe Phe Met Gly Gln Thr Ala Gln Thr Glu Glu Leu Ser Gln Val
 245 250 255
 Lys Glu Gly Phe Gly Thr Leu Val Ala His Gln Lys Phe Trp Ser Phe
 260 265 270
 Ala Lys His Lys Val Pro Ala Ile Lys Ala Ala Trp Phe Glu Cys Ile
 275 280 285
 Tyr His Ile Leu Gln Ser Val Ala Leu Leu Asp Val Ile Thr Pro Gln
 290 295 300
 Lys Thr Gln Leu Thr Asn Leu Cys Phe Gln Phe Ile Asp Asp Ala Asp
 305 310 315 320
 Pro Val Val Ala Pro His Ile Trp Gly Cys Val Leu Leu Leu Gln Ser
 325 330 335
 Asn Tyr Val Asp Trp Phe Val Pro Leu Asn Ile Arg Lys Thr Leu Leu
 340 345 350
 Pro Lys Leu Ser Ser Leu Leu Gln Asn Gly Phe Asn Arg Asn Ala Gln
 355 360 365
 Ala Ile Cys Pro Asn Leu Leu Pro Phe Leu Ser Lys Val Thr Gln Ala
 370 375 380

Ser Leu Gln Asp Leu Asp Ile Tyr Asp Phe Tyr Gln Arg Phe Phe Asp
 385 390 395 400
 Asp Met Lys Leu Ala Val Thr Lys Lys Phe Asp Pro Pro Leu Ser Lys
 405 410 415
 Ser Asp Cys Ile Val Ile His Asn Ala Tyr Phe Glu Cys Leu Arg Phe
 420 425 430
 Leu Met Gln Gln Ile Asn Asn Asn Lys Gln Arg Glu Gln Lys Glu Glu
 435 440 445
 Glu Phe Ser Phe Ser Leu Leu Asp Asn Asn Val Leu Glu Pro Ile Ala
 450 455 460
 Trp Leu Leu Lys Ser Asp Ser Thr His Val Lys Ile Phe Phe Gln His
 465 470 475 480
 Ser Ser Ala Leu Val Ala Phe Trp Asp Arg Gln Ile Asn Asn Arg Leu
 485 490 495
 Asp Asn Gly Asp Leu Tyr Ala Lys Leu Leu Asn Lys Phe Trp Ile Arg
 500 505 510
 Ile Phe Glu Leu Val Thr Gln Asp Leu Ser Ala Glu Glu Val Asn Glu
 515 520 525
 Gln Leu Leu Gly His Val Leu Leu Leu Val Gln Asp Leu His Met Ala
 530 535 540
 Asn Pro Ser Leu Glu Ser Pro Ser Val Lys Phe Val Glu Gly Pro Asn
 545 550 555 560
 Glu Lys Ile Glu Lys Ser Glu Pro Thr Thr Pro Val Lys Lys Ala Gln
 565 570 575
 Glu Ala Ala Ala Phe Ile Gln Lys Glu Leu Lys Gln Leu Val Ile Lys
 580 585 590
 Leu Val Arg Ile Cys Leu Asp Lys Ala Asn Lys Gly Ser Gly Ser Gly
 595 600 605
 Thr Ser Ser Ser Arg Tyr Ile Glu Gln Ile Arg Thr Leu Thr Lys Met
 610 615 620
 Phe Asn Asp Ala Ala Phe Tyr Lys Ser Leu Thr Asp Asp Gly Asp Leu
 625 630 635 640
 Ala Ser Ala Leu Asn Lys Phe Val Ser Leu Leu Gly Gln Leu Ser Cys
 645 650 655
 Gln Ala Cys Glu Ser Val Val Glu Ile Val Phe Glu Ile Leu Pro Leu
 660 665 670

Leu Glu Thr Gly Lys Arg Phe Glu Tyr Ile Glu Asn Thr Leu Met Lys
 675 680 685
 Leu Pro Gln His Gly Val Gln Asn Leu Leu Leu His Arg Leu Leu Ser
 690 695 700
 Tyr Pro Leu Cys Ala Glu Ala Ala Val Arg Gln Met Leu Ser Gly Pro
 705 710 715 720
 Glu Thr Cys Glu Met Ile Ala Arg Ile Ala Glu Glu Val Val Val Asp
 725 730 735
 Asn Asp Arg Glu Lys Leu Asn Leu Leu His Lys Cys Phe Phe Gln Thr
 740 745 750
 Asp Thr Gly Asp Ile Leu Ile Asn Ala Lys Thr Val Asp Lys Ile Leu
 755 760 765
 Leu Ser Met Cys Gly Pro Leu Glu Gln Pro Val Val Asp Asp Ala Val
 770 775 780
 Glu Val Cys Gly Ser Phe Ile Ala Gln Ile Met Pro Val Ile Cys Ser
 785 790 795 800
 Asn Asn Asn Ser Ser Leu His Val Arg Gln His Ile Phe Leu Lys Leu
 805 810 815
 Phe Lys Phe Ser Leu Glu His Arg Pro Glu Asp Tyr Leu Ser Glu Asp
 820 825 830
 Thr Leu Trp Glu Ile Thr Thr Cys Trp Gln Asp Gly Leu Ser Ser Lys
 835 840 845
 Asp Ile Glu Ile Asp Asp Asp Met Leu Lys Cys Cys Ala Gly Ile Val
 850 855 860
 Glu Glu Leu Ala Asn Ser Ala Glu Leu Lys Ala Asp Thr Leu Asp Gly
 865 870 875 880
 Met Ala Glu Ala Met Ala Lys Phe Val Ile Cys Ser Thr Glu Asn Ile
 885 890 895
 Glu Asp Glu Tyr Lys Arg Leu Glu Arg Ile Asp Glu Thr Leu Thr Ala
 900 905 910
 Leu Leu Glu Thr Pro Leu Lys Thr Thr Asp Lys Val Gln Gln Phe Glu
 915 920 925
 Asn His Cys Val Leu Leu Glu Ala Leu His Gly Ser Val Thr Ala Gly
 930 935 940
 Val Pro Phe Glu Asn Ala Cys Leu Ser Arg Asn Glu Ile Leu Pro Leu
 945 950 955 960

Leu Gln Arg Ser Thr Leu Asn Phe Ser Thr Ile Tyr Lys Leu Val Tyr
 965 970 975
 Gln Phe Pro Pro Pro Gln Asp Thr Asn Asp Pro Glu Asp Glu Leu Thr
 980 985 990
 Glu Asp Tyr Cys Asp Pro Asn Ala Asp Val Leu Lys Lys Trp Asn Glu
 995 1000 1005
 Pro Leu Ile Ala Glu Leu Leu Gln Cys Ile Arg Val Ala Gly Thr Ala
 1010 1015 1020
 Glu Cys Trp Leu Glu Met Ser Val Leu Gln Ser Ser Thr Glu Glu Leu
 1025 1030 1035 1040
 Val Leu Ile Leu Ser Glu Lys Val Gln Ser Phe Met Gly Asn Ser Ser
 1045 1050 1055
 Asp Leu Val Ala Ile Val Lys Glu Arg Leu Gln Gln Ala Ala Val Gln
 1060 1065 1070
 Gln Ser Ser Val Ile Asp Cys Arg Leu Leu Ser Tyr Leu Arg Phe Cys
 1075 1080 1085
 Pro Gln Tyr Ala Ala Phe Glu Glu Ser Ala Ser Ile Leu Leu His Glu
 1090 1095 1100
 Asp Leu Ser Glu Asn Leu Val Thr Gln Gly Ala Leu Lys Thr Tyr Val
 1105 1110 1115 1120
 Ile Ala Leu Gln Phe Leu Leu Pro Lys Leu Ser Gln Lys Ala Ile Thr
 1125 1130 1135
 Leu Ser Ser Ala Ile Met Gly Thr Glu Pro Pro Glu Ile Trp Val Lys
 1140 1145 1150
 Ala Ala Val Phe His Ala Leu Leu Leu Asn Asn Phe Glu Gly Asp Val
 1155 1160 1165
 Asn Glu Gln Thr Asp Arg Asn Ile Ile Val Ser Ala Val Gln Phe Met
 1170 1175 1180
 Thr Ser Ile Gly Glu Arg Gln Ala Ser Gln Lys Asp Leu Leu His Tyr
 1185 1190 1195 1200
 Asn Val Glu Ile Gln Arg Gln Pro Tyr Glu Ser Val Ile Asn Thr Val
 1205 1210 1215
 Glu Phe Ile Lys Leu Leu Thr Glu Val Leu Lys Arg Phe Pro Tyr Glu
 1220 1225 1230
 Leu Ser Ile Lys Asn Trp Asp Ala Ile Arg Ile Gly Leu Ser Ser Trp
 1235 1240 1245

Val Leu Ser Val Ser Lys Ser Ile Ala Gln Tyr Gln Asp Pro Lys Thr
 1250 1255 1260

Ser Leu Phe Ile Val Ala Val Tyr Glu Leu Phe Ala Ala Leu Ile Asp
 1265 1270 1275 1280

Phe Ile Arg Ser Glu Lys Gln Lys Ser Ser Thr Glu Leu Leu Lys Asn
 1285 1290 1295

Met Ile Asp Glu Trp Asp Ser Leu Phe Ala Lys Glu Val Asn Leu Val
 1300 1305 1310

Leu Phe Lys Ser Tyr Tyr Leu Leu Thr His Glu Val Ser Val Asp Pro
 1315 1320 1325

Gly Phe Gln Ala Cys Tyr Glu Ala Leu Leu Glu Gln Ile Thr Pro Val
 1330 1335 1340

Ile Glu Arg Leu Asp Tyr Ser Phe Val Tyr Ser Phe Cys Lys Ser Asn
 1345 1350 1355 1360

Ser Asn Ile Thr Leu Asp His Leu Cys Asn Phe Leu Phe Lys Gln Leu
 1365 1370 1375

Tyr Ser Val Gln His Ser Val Arg Leu Ser Ala Val His Ser Leu Arg
 1380 1385 1390

Gln Leu Thr Pro His Phe Val Ala Asp Asp Ile Glu Leu Asn Glu Lys
 1395 1400 1405

Gln Ser Glu Ser Leu Asp Ala Ser Thr Thr Ile Cys Lys Trp His Phe
 1410 1415 1420

Leu Asn Arg Phe Glu Asp Tyr Leu Thr Arg Tyr Asp Ala Leu Ile Thr
 1425 1430 1435 1440

Lys Tyr Leu Glu Glu Phe Thr Phe Lys Leu Ser Glu Leu Asp Asp Leu
 1445 1450 1455

Glu Pro Ile Asp Arg His Asn Ala Leu Ser Tyr Leu Phe Leu Trp Asp
 1460 1465 1470

Cys Ile Ile Asn Ala Cys Ala Lys Ser Pro Val Ala Leu Arg Ala Val
 1475 1480 1485

Tyr Thr Asn Trp Leu Asn Asp Asn Lys Tyr Glu Glu Asn Phe Leu His
 1490 1495 1500

Phe Leu Phe Arg Ala Met Pro Val Asp Ile Leu Lys Asn His Gly Ala
 1505 1510 1515 1520

Lys Val His Ser Asn Gly Val Tyr Lys Glu Leu Thr Trp Ser Gln Gln
 1525 1530 1535

Lys Asp Arg His Leu Pro Leu Glu Arg Tyr Ala Cys His Leu Tyr Thr
 1540 1545 1550
 Glu Val Leu Arg Lys Leu Pro Ala Val Val Arg Arg Trp Trp Asn Ala
 1555 1560 1565
 Thr Gln Ser Arg Gln Lys Asn Phe Ile Asp Asn Leu Thr Thr Asn Tyr
 1570 1575 1580
 Val Ser Ser Leu Ile Cys Ser Glu Glu Leu Lys Ala Ile Ala Asn Arg
 1585 1590 1595 1600
 Lys Glu Lys His Glu Asn Met Gln Val Thr Val His Ser Ser Thr Arg
 1605 1610 1615
 Glu Val Leu Ala Val Tyr Ala Ile Asp Glu Ala Arg Met Glu Leu Val
 1620 1625 1630
 Ile Thr Leu Ala Pro Asn Tyr Pro Leu Gly Ala Val Lys Val Glu Cys
 1635 1640 1645
 Gly Lys Gln Ile Gly Gly Arg Ala Ser Ser Arg Asn Val Gly Met Gln
 1650 1655 1660
 Leu Thr Ile Phe Leu Thr His Gln Asn Gly Thr Ile Tyr Asp Gly Leu
 1665 1670 1675 1680
 Thr Met Trp Lys Asn Asn Leu Asp Lys Lys Phe Glu Gly Val Glu Glu
 1685 1690 1695
 Cys Tyr Val Cys Tyr Thr Val Ile His Gln Glu Thr Cys Gln Leu Pro
 1700 1705 1710
 Lys Leu Thr Cys Lys Thr Cys Lys Lys Lys Phe His Gly Pro Cys Leu
 1715 1720 1725
 Tyr Lys Trp Phe Thr Thr Ser Ser Lys Ser Thr Cys Pro Ile Cys Arg
 1730 1735 1740
 Asn Val Phe
 1745
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 <211> 1566
 <212> PRT
 <213> *Caenorhabditis elegans*
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 Lys Lys Cys Phe Phe Pro Asn Val Ser Ala Glu Ile Asn Val Ala Ser
 20 25 30

Ser Asn Arg Leu His Gln Val Val Glu Ile Asp Asp Glu Thr Arg Ile
 35 40 45
 Val Met Lys Lys Leu Thr Lys Lys Asp Cys Gln Thr Arg Glu Lys Gly
 50 55 60
 Leu Lys Glu Leu Met Glu Leu Ile Asn Thr Glu Asn Ser Ser Ile Glu
 65 70 75 80
 Ser Ser Tyr Glu His Phe Cys Gly Leu Val Ala Gln Leu Thr Thr Asp
 85 90 95
 Gly Ser Pro Thr Val Arg Met Leu Thr Met Lys Val Ile Ser Gln Phe
 100 105 110
 Leu Thr Lys Leu Lys Lys Ser Ala Ser Lys Gly Leu Lys Lys Ile Ile
 115 120 125
 Pro Phe Val Leu Phe Ala Lys Ser Asp Val Thr Asn Gly Val Ala Ala
 130 135 140
 Ala Ala Ser Ala Val Ile Arg Asp Gly Phe Asp Ala Asp Lys Lys Arg
 145 150 155 160
 Gln Val Val Glu Leu Phe Val Pro Asn Thr Phe Asp Leu Ala Ala Lys
 165 170 175
 Ile Ala Glu Gly Lys His Glu Leu Ser Leu Pro Ala Glu Tyr Asp Ala
 180 185 190
 Ser Glu Asp Leu Glu Thr Arg Lys Met Arg Leu Glu Thr Gln Ser Leu
 195 200 205
 Asn Thr Phe Leu Ser Tyr Ile Lys Glu Tyr Gly Asn Glu Ser Lys Leu
 210 215 220
 Trp Glu Glu Pro Ala Arg Lys Leu Phe Ser Asn Ser Glu Phe Ile Lys
 225 230 235 240
 Lys Thr Phe Ala Gly Lys Lys Glu Ala Leu Lys Val Gln Leu Leu Asn
 245 250 255
 Ile Ser Tyr Lys Phe Ser Asp Asn Ile Glu Val Ile Leu Ser Asn Pro
 260 265 270
 Val Ile Ser Thr Tyr Ile Gln Ala Ser Leu Asp Ala Gln Thr Phe Ser
 275 280 285
 Thr Glu Cys Ala Thr Ala Trp Glu Gly Ile Leu Ile Leu Leu Pro Asp
 290 295 300
 Glu Arg Phe His Ala Lys Cys Ser Leu Gln Lys Gly Ile Tyr Pro Arg
 305 310 315 320

Leu Leu Asn Leu Ile Arg Lys Lys Gly Asn His Trp Arg Val Leu Lys
 325 330 335
 His Tyr Leu Leu Pro Ala Val Ser Val Leu Leu Gln Lys Leu Glu Asn
 340 345 350
 Pro Ala Leu Ile Thr Ser Ile Ile Thr Ser Phe Thr Asp Asn Leu Pro
 355 360 365
 Trp Gln Ala Glu Ala Ser Met Asn Ala Ile His Cys Trp Phe Cys Thr
 370 375 380
 Phe Ser Asp Phe Val Lys Trp Ile Leu Gly Asn Asp Arg Ile Asn Leu
 385 390 395 400
 Glu Ile Leu Lys Asp Leu Ser Pro Leu Ile Val Glu Met Ser Asn Gln
 405 410 415
 Ser Met His Phe Asn Thr Ala Glu Ala Thr Glu Cys Ile Ser Gly Leu
 420 425 430
 Ile His Trp Ile Ile Glu Lys Lys Val Leu Glu Asn Pro Ala Glu Phe
 435 440 445
 Phe Asp Leu Leu Lys Thr Ser Ile Tyr Glu Val Ala Pro Pro Glu Lys
 450 455 460
 Ser Arg Leu Phe Ala Asp Ser Leu Thr Leu Pro Ala Lys His Leu Glu
 465 470 475 480
 Leu Ala His Leu His Gly Asn Leu Leu Ser Asn Pro Asp Val Asp Phe
 485 490 495
 His Ile Ile Arg Asn Leu Ala Arg Ala Ser Asn Ser Glu Tyr Phe Glu
 500 505 510
 Glu Thr Cys Arg Asn Ile Asn Asn Phe Glu Phe Ile Glu Asn Ser Asp
 515 520 525
 Arg Phe Asp Met Leu Gln Ala Val Glu Ile Val Lys Leu Ile Glu Met
 530 535 540
 Lys Pro Ser Leu Ser Leu Gln Ile Lys Asn Asn His Val Gly Arg Gln
 545 550 555 560
 Leu Leu Leu Ser Glu Asn Ser Glu Ile Trp Glu Lys Ser Leu Lys Asn
 565 570 575
 Val Pro Ala Gly Val Phe Gln Glu Met Val Asn Phe Trp His Glu Lys
 580 585 590
 Arg Asn Gly Lys Ala Ile Ala Gln Ala Val Asn Phe Leu Lys Lys Met
 595 600 605

Gly Ile Gln Leu Asp Thr Asn Ala Ala Ala Glu Asn Val Asp Phe Leu
 610 615 620
 Ile Ser Leu Leu Gln Ser Leu Asp Ser Lys Glu Asp Pro Glu Glu Arg
 625 630 635 640
 Lys Asn Leu Val Leu Lys Leu Leu Ser Ala Leu Phe Asp Ala Glu Asp
 645 650 655
 Glu Pro Lys Leu Glu His Phe Glu Ser Leu Lys Ser His Leu Asn Gly
 660 665 670
 Asp Phe Glu Gln Phe Phe Glu Lys Leu Phe Ala Asn Met Glu Glu Glu
 675 680 685
 Asp Ala Glu Arg Val Leu Glu Ile Ala Ala Arg Phe Asp Lys Leu Val
 690 695 700
 Gly Phe Cys Asp Ala Asp Ser Arg Gly Glu Ile Ala Gly Lys Met Ile
 705 710 715 720
 Leu Gly Arg Arg Glu Phe Asp Glu Met Ser Glu Lys Leu His Phe Leu
 725 730 735
 Glu Leu Asp Val Leu Thr Val Ser Gln His Thr Thr Ile Ile Thr Asp
 740 745 750
 Ala Leu Ser Arg Pro Ile Glu His Leu Glu Glu Lys Glu Ala Thr Lys
 755 760 765
 Met Val Lys Glu Leu Gly Arg Leu Ala Leu Phe Ser Val Ala Ser Asn
 770 775 780
 Tyr Asn Ser Ser Ile His Gln Leu Phe Ala Trp Gln Met Ile Arg Val
 785 790 795 800
 Ile Ser Ala Leu Gly Asn Arg Tyr Cys Leu Lys Phe Leu Asp Glu Glu
 805 810 815
 Leu Gln Gln Leu Arg Ile Glu Leu Glu Lys Arg Val Ile Lys Ser Glu
 820 825 830
 Glu Ile Gln Lys Leu Ile Asn Asp Gly Cys Cys Cys Ala Pro Asn Phe
 835 840 845
 Ile Thr Asp Thr Tyr Gly Ile Pro Glu Lys Arg Gln Lys Phe Glu Glu
 850 855 860
 Tyr Ser Glu Asp Met Asp Thr Lys Ile Glu Thr Ile Tyr Leu Lys Thr
 865 870 875 880
 Asp Thr Pro Leu Glu Tyr Val Glu Lys Val Phe Glu Ala Ser Gln Ser
 885 890 895

Glu Asn Ser Phe Pro Leu Phe Gln Phe Asp Gln Ser Lys Lys Tyr Glu
 900 905 910
 Trp Leu Ala Asn Leu Thr Phe Val Lys Arg Phe Ile Gln Cys Gly Gly
 915 920 925
 Glu Ile Phe Arg Ala Glu Asn Leu Glu Phe Arg Asp Phe Thr Leu Cys
 930 935 940
 Gly Ile Ile Thr Val Leu Asp Thr Ser Thr Asp Ile Leu Ile Asp Ser
 945 950 955 960
 Pro His Ser Phe Ser Glu Asn Pro Leu Leu Glu Ala Leu Thr Thr Leu
 965 970 975
 Tyr Leu Glu Leu Phe Val Val Leu Thr Asp Ala Thr Lys Arg Gly Ala
 980 985 990
 Tyr Ser Glu Gln Ser Val Glu Glu Trp Asn Glu Phe Tyr Thr Pro Thr
 995 1000 1005
 Ile His Thr Tyr Cys Ile Arg Leu Phe Arg Thr Ile Arg Arg Asp Gln
 1010 1015 1020
 Gln Pro Thr Pro Phe Val Arg Ala Leu Leu Arg Ala Leu Phe Val Ile
 1025 1030 1035 1040
 Ser Glu Phe Pro Thr Ser Phe Ser Asn Asp Asp Asp Val Ala Asn Gln
 1045 1050 1055
 Glu Phe Ile Pro Glu Leu Ser Val Phe Lys Tyr Pro Ala Phe Gln Glu
 1060 1065 1070
 Ser Cys Ile Ala Gln Ala Phe Ser Leu Phe Ala Ser Asn Asn Glu His
 1075 1080 1085
 Ile Gln Leu Ile Ala Tyr Ser Val Ala Arg Leu Leu Met Pro Ile Met
 1090 1095 1100
 Phe Lys Leu Glu Asn Ala Ala Ala Leu Lys Ser Asn Glu Asp Ser Glu
 1105 1110 1115 1120
 Leu Pro Val Ser Thr Asn Arg Arg Lys Leu Ser Leu Pro Val Met Ile
 1125 1130 1135
 Ser Lys Ser Tyr Pro Lys Asp His His Asn Pro His Val Gly Pro Leu
 1140 1145 1150
 Leu Leu Asp Leu Thr Leu Leu Pro Leu Glu Asn Thr Lys Asp Ser Gly
 1155 1160 1165
 Phe Ser Gln Glu His Arg Val Ala Tyr Cys Asp Val Ile Asp Pro Phe
 1170 1175 1180

Phe Lys Asn Ala Leu Asn Ala Leu Met Leu Asp Gln Pro Phe Glu Phe
 1185 1190 1195 1200
 Arg Gln Val Pro Ile Gly Cys Arg Ile Gln Asn Arg Lys Phe Glu Arg
 1205 1210 1215
 Lys Leu Lys Lys Asn Val Lys Lys Ser Glu Ile Leu Gln Phe Phe Cys
 1220 1225 1230
 Arg Lys Tyr Gly Thr Pro Gly Leu Asp Ala Ile Asn Leu Cys Leu Lys
 1235 1240 1245
 Lys Leu Arg Thr Ser Phe Tyr Ile Leu Leu Lys Phe Gly Phe Val Glu
 1250 1255 1260
 Ile Ser Thr Ile Phe Arg Asn Met Asp Arg Lys Lys Ala Glu Ile Phe
 1265 1270 1275 1280
 Lys Asn Arg Lys Thr Asn Asn Phe Arg Ser Ile Phe His Gln Ile Leu
 1285 1290 1295
 Phe Met Leu Met Arg Lys Lys Pro Ile Lys Lys Pro Arg Thr Lys Gly
 1300 1305 1310
 Asn Lys Cys Leu Cys Phe Phe Leu Ile Asn Ile Asn Lys Thr Arg Phe
 1315 1320 1325
 Lys Asn Phe Asp Phe Leu Lys Lys Arg Lys Ile Glu Asn Ser Lys Ser
 1330 1335 1340
 Gln Glu Arg Ala Tyr Tyr Leu Glu Ser Asp Leu Ser Ala Ser Pro Ile
 1345 1350 1355 1360
 Phe Phe Asp Lys Phe Ala Ser Arg Leu Leu Phe Lys Ser Met Thr Leu
 1365 1370 1375
 Leu Pro Ala Ala Ile Arg Leu Phe Tyr Lys Gly Met Pro Asn Cys Phe
 1380 1385 1390
 Met Pro Met Phe Gln Glu Thr Val Thr Lys Tyr Ala Ser Arg Leu Leu
 1395 1400 1405
 Ile Glu Gln Glu Leu Gly Lys Val Arg Glu Ala Lys Phe Glu Gly Glu
 1410 1415 1420
 Met Lys Val Arg Thr Val Pro Val Thr Gly Glu Ile Ile Ala Glu Tyr
 1425 1430 1435 1440
 Val Val Glu Glu Thr Lys Met Lys Leu Thr Ile Gly Leu Pro Pro Asp
 1445 1450 1455
 Tyr Pro Leu Ser Val Pro Ser Leu Thr Leu Asp Lys Ala Ile Val Lys
 1460 1465 1470

Thr Asp Arg Ala Lys Lys Trp Leu Leu Gln Leu Asn Ala Tyr Leu Phe
 1475 1480 1485

His Gln Asn Gly Ala Ile Leu Glu Gly Ile Glu Met Trp Lys Arg Asn
 1490 1495 1500

Val Asp Lys Gly Val Glu Gly Val Glu Asp Cys Thr Ile Cys Met Met
 1505 1510 1515 1520

Thr Val His Gln Gln Thr His Gln Leu Pro Lys Ile Lys Cys Lys Gln
 1525 1530 1535

Cys Lys Asn Lys Phe His Ser Asn Cys Leu Tyr Lys Trp Phe Glu Ser
 1540 1545 1550

Ser Asn Gln Ser Thr Cys Pro Leu Cys Arg Asn Asn Phe Thr
 1555 1560 1565

<210> 11

<211> 1562

<212> PRT

<213> *Saccharomyces cerevisiae*

<400> 11

Met Ser Phe Gly Gly Ile Asn Thr Phe Gln Gln Tyr Asn Thr Asp Leu
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Gly Leu Gly His Asn Gly Val Arg Ile Ser Leu Asn Tyr Phe Asp Gly
 20 25 30

Leu Pro Asp Pro Ser Leu Leu Asn Ser Leu Tyr Ser Asn Glu Leu Lys
 35 40 45

Leu Ile Phe Lys Ser Leu Leu Lys Arg Asp Glu Thr Thr Lys Glu Lys
 50 55 60

Ala Leu Met Asp Leu Ser Asn Leu Ile Ser Asp Phe Asn Gln Asn Glu
 65 70 75 80

Tyr Phe Phe Asn Asp Ile Phe Leu Leu Cys Trp Ser Gln Ile Tyr Ala
 85 90 95

Lys Leu Ile Ile Ser Asp Tyr Lys Val Ile Arg Leu Gln Ser His Gln
 100 105 110

Ile Thr Ile Met Leu Val Lys Ser Leu Arg Lys Lys Ile Ser Lys Phe
 115 120 125

Leu Lys Asp Phe Ile Pro Leu Ile Leu Leu Gly Thr Cys Glu Leu Asp
 130 135 140

Tyr Ser Val Ser Lys Pro Ser Leu Asn Glu Leu Thr Glu Cys Phe Asn
 145 150 155 160
 Lys Asp Pro Ala Lys Ile Asn Ala Leu Trp Ala Val Phe Gln Glu Gln
 165 170 175
 Leu Leu Asn Leu Val Lys Glu Ile Val Val Asn Glu Asn Glu Asp Thr
 180 185 190
 Ile Ser Asp Glu Arg Tyr Ser Ser Lys Glu Glu Ser Glu Phe Arg Tyr
 195 200 205
 His Arg Val Ile Ala Ser Ala Val Leu Leu Leu Ile Lys Leu Phe Val
 210 215 220
 His Asn Lys Asp Val Ser Glu Arg Asn Ser Ser Ser Leu Lys Val Ile
 225 230 235 240
 Leu Ser Asp Glu Ser Ile Trp Lys Leu Leu Asn Leu Lys Asn Gly Gln
 245 250 255
 Asn Thr Asn Ala Tyr Glu Thr Val Leu Arg Leu Ile Asp Val Leu Tyr
 260 265 270
 Thr Arg Gly Tyr Met Pro Ser His Lys Asn Ile Met Lys Leu Ala Val
 275 280 285
 Lys Lys Leu Leu Lys Ser Leu Thr His Ile Thr Ser Lys Asn Ile Leu
 290 295 300
 Lys Val Cys Pro Val Leu Pro Ser Ile Leu Asn Leu Leu Ala Thr Leu
 305 310 315 320
 Asp Asp Tyr Glu Asp Gly Thr Ile Trp Ser Tyr Asp Lys Ser Ser Lys
 325 330 335
 Glu Lys Val Leu Lys Phe Leu Ser Val Ser Arg Thr Ser Pro Ser Pro
 340 345 350
 Gly Phe Phe Asn Ala Val Phe Ala Leu Tyr Ser Ser Thr Lys Arg His
 355 360 365
 Ser Phe Leu Asp Tyr Tyr Leu Glu Trp Leu Pro Phe Trp Gln Lys Ser
 370 375 380
 Val Gln Arg Leu Asn Glu Lys Gly Phe Ser Ala Arg Asn Ser Ala Glu
 385 390 395 400
 Val Leu Asn Glu Phe Trp Thr Asn Phe Leu Lys Phe Ala Glu Asp Ser
 405 410 415
 Ser Glu Glu Arg Val Lys Lys Met Val Glu Ser Glu Ile Phe Asn Ser
 420 425 430

Leu Ser Cys Gly Lys Ser Leu Ser Glu Tyr Thr Lys Leu Asn Gln Thr
 435 440 445
 Leu Ser Gly Val Phe Pro Pro Asp Lys Trp Glu Arg Glu Ile Glu Asp
 450 455 460
 Tyr Phe Thr Ser Asp Glu Asp Ile Arg Lys Ile Lys Val Ser Phe Glu
 465 470 475 480
 Lys Asn Leu Phe Ala Leu Leu Val Thr Ser Pro Asn Asn Glu Ser Ala
 485 490 495
 Ile Ser Arg Leu Phe Asp Phe Phe Val Gln Leu Ile Glu Thr Asp Pro
 500 505 510
 Ser Asn Val Phe Asn Lys Tyr Asp Gly Val Tyr Asp Ala Leu Asn Tyr
 515 520 525
 Phe Leu Asp Ser Asp Met Ile Phe Leu Asn Gly Lys Ile Gly Lys Phe
 530 535 540
 Ile Asn Glu Ile Pro Thr Leu Val Gln Glu Ser Thr Tyr Gln Asn Phe
 545 550 555 560
 Ala Gly Ile Met Ala Gln Tyr Ser Asn Ser Lys Phe Phe Lys Met Asn
 565 570 575
 Thr Asp Ala Ile Thr Ser Leu Glu Asp Phe Phe Ile Val Ala Leu Ser
 580 585 590
 Phe Asn Leu Pro Lys Thr Ile Ile Leu Ala Thr Met Asn Glu Leu Asp
 595 600 605
 Asn Asp Ile Tyr Gln Gln Leu Met Lys Ser Asp Ser Leu Glu Leu Glu
 610 615 620
 Leu Tyr Ile Glu Asp Phe Met Lys Asn Tyr Lys Phe Asp Asp Ser Gly
 625 630 635 640
 Glu Ile Phe Lys Gly Asn Asn Lys Phe Leu Asn Gln Arg Thr Ile Thr
 645 650 655
 Thr Leu Tyr Arg Ser Ala Val Ala Asn Gly Gln Val Glu Gln Phe Cys
 660 665 670
 Ala Val Leu Ser Lys Leu Asp Glu Thr Phe Phe Ser Thr Leu Leu Leu
 675 680 685
 Asn Thr Asp Phe Leu Ser Cys Ala Leu Tyr Glu Val Ser Glu Asp Thr
 690 695 700
 Asn Glu Lys Leu Phe Lys Leu Ser Leu Gln Leu Ala Lys Gly Asn Ser
 705 710 715 720

Glu Ile Ala Asn Lys Leu Ala Gln Val Ile Leu Gln His Ala Gln Val
 725 730 735
 Tyr Phe Ser Pro Gly Ala Lys Glu Lys Tyr Val Thr His Ala Val Glu
 740 745 750
 Leu Ile Asn Gly Cys Asn Asp Thr Ser Gln Ile Phe Phe Pro Ala Asn
 755 760 765
 Ala Ile Glu Val Phe Ala Arg Tyr Met Pro Ala Ile Asp Tyr Arg Ser
 770 775 780
 Ser Leu Val Ser Ser Leu Ser Thr Asn Thr His Leu Leu Leu Thr Asp
 785 790 795 800
 Asp Lys Pro Ile Asn Leu Lys Asn Met Gln Lys Leu Ile Arg Tyr Ala
 805 810 815
 Leu Phe Leu Asp Ala Leu Leu Asp Ala Leu Pro Glu Arg Val Asn Asn
 820 825 830
 His Ile Val Ala Phe Ile Thr Val Val Ser Glu Leu Val Thr Asp Tyr
 835 840 845
 Asn Cys Leu Ser Glu Glu Pro Asn Asp Leu Tyr Tyr Asp Phe Gly His
 850 855 860
 Thr Phe Phe Lys His Gly Lys Val Asn Leu Asn Phe Ser Asp Ile Val
 865 870 875 880
 Gly Asn Val Ile Gln Pro Ala Asn Gly Gly Asp Ala Met Leu Thr Phe
 885 890 895
 Asp Ile Ala Glu Ser Asn Ser Val Tyr Phe Phe Tyr Tyr Ser Arg Val
 900 905 910
 Leu Tyr Lys Val Leu Leu Asn Ser Ile Asp Thr Val Ser Ser Thr Thr
 915 920 925
 Leu Asn Gly Leu Leu Ala Ser Val Glu Ser Phe Val Thr Lys Thr Val
 930 935 940
 Arg Asp Gln Lys Ser Thr Asp Lys Asp Tyr Leu Leu Cys Ala Ile Leu
 945 950 955 960
 Leu Leu Met Phe Asn Arg Ser Asn Ser Lys Asp Glu Ile Thr Lys Leu
 965 970 975
 Arg Thr Leu Leu Ala Ser Gln Leu Ile Gly Ile Arg Glu Val Glu Leu
 980 985 990
 Val Asp Gln Glu Phe Lys Ser Leu Ala Leu Leu Asn Asn Leu Leu Asp
 995 1000 1005

Ile Pro Gln Ala Asp Lys Gln Phe Val Pro Ile Ala Pro Gln Arg Leu
 1010 1015 1020
 Asn Met Ile Phe Arg Ser Ile Leu Lys Trp Leu Asp Ser Asp Leu Ala
 1025 1030 1035 1040
 Tyr Glu Pro Ser Phe Ser Thr Val Arg Leu Leu Leu Asp Phe Phe
 1045 1050 1055
 Thr Lys Leu Met Arg Phe Glu Gly Val Arg Asp Met Gly Ile Thr Ala
 1060 1065 1070
 Phe Glu Leu Ser Glu Arg Leu Leu Ala Asp Ser Leu Ser Met Cys Gln
 1075 1080 1085
 Ile Asp Asp Thr Leu Tyr Leu Leu Glu Leu Arg Ser Ser Cys Leu Asn
 1090 1095 1100
 Leu Tyr Glu Thr Leu Ser Gln Gly Val Ser Lys Asn Gly Glu Glu Ile
 1105 1110 1115 1120
 Ser Glu Tyr Gly Asp Glu Ile Gln Glu Asn Leu Ile Glu Leu Met Phe
 1125 1130 1135
 Leu Asn Phe Asn Gln Glu Arg Asn Asn Gln Val Ser Thr Leu Phe Tyr
 1140 1145 1150
 Gln Lys Leu Tyr Lys Val Ile Ser Ser Met Glu Leu Lys Lys Leu Glu
 1155 1160 1165
 Ser Gln Tyr Lys Arg Ile Phe Glu Val Val Leu Asn Asp Lys Asp Ile
 1170 1175 1180
 Gly Ser Asn Ile Asn Gln Ser Arg Leu Leu Thr Thr Leu Leu Gly Ser
 1185 1190 1195 1200
 Leu Val Val Lys Thr Gln Gln Asp Ile Ile Ile Glu Tyr Glu Leu Arg
 1205 1210 1215
 Ile Gln Lys Gln Thr Gly Ser Asp Val Asp Gly Ser Ala Ser Asp Asn
 1220 1225 1230
 Asp Val Asn Ser Lys Phe Lys Leu Pro Gln Lys Leu Leu Gln Lys Val
 1235 1240 1245
 Thr Asp Glu Val Pro Lys Glu Tyr Leu Glu Tyr Glu Asn Lys Asn Ser
 1250 1255 1260
 Phe Ile Lys Tyr Leu Trp Tyr Trp His Leu Ile Leu Met Tyr Phe Lys
 1265 1270 1275 1280
 Asp Thr Ser Tyr Asn Met Arg Gln Ile Phe Ile Glu Gln Leu Lys Glu
 1285 1290 1295

Ala Gly Leu Ile Asn Arg Met Phe Asp Phe Ile Thr Asp Gln Ile Asp
 1300 1305 1310
 Leu Arg Asp Thr Glu Phe Trp Lys Gln Val Asp Thr Lys Glu Ile Ser
 1315 1320 1325
 Glu Tyr Asn Ile Val Gly Asn Asn Phe Ser Pro Tyr Lys Glu Asp Ile
 1330 1335 1340
 Phe Glu Glu Cys Lys Lys Leu Leu Gly His Thr Leu Tyr Gln Leu Phe
 1345 1350 1355 1360
 Asn Asn Val Gly Cys Leu Thr Ser Ile Trp Trp Leu Asn Ile Lys Asp
 1365 1370 1375
 Arg Thr Leu Gln Asn Asp Ile Glu Lys Phe Val Ser Glu Phe Ile Ser
 1380 1385 1390
 Pro Ile Leu Ile Lys Asn Glu Phe Asp Asp Ile Asn Ser Lys Met Asp
 1395 1400 1405
 Arg Leu Thr Ser Asn Asp Asp Ala Leu Thr Ile Lys Leu Asn Asn Ile
 1410 1415 1420
 Thr Asn Glu Val Lys Ala Ser Tyr Leu Ile Asp Asp Gln Lys Leu Glu
 1425 1430 1435 1440
 Ile Ser Phe Lys Leu Pro Lys Asn Tyr Pro Leu Thr Asn Ile Gln Val
 1445 1450 1455
 Asn Gly Val Ser Arg Val Gly Ile Ser Glu Gln Lys Trp Lys Gln Trp
 1460 1465 1470
 Ile Met Ser Thr Gln His Val Ile Thr Gly Met Asn Gly Ser Val Leu
 1475 1480 1485
 Asp Ser Leu Glu Leu Phe Thr Lys Asn Val His Leu Gln Phe Ser Gly
 1490 1495 1500
 Phe Glu Glu Cys Ala Ile Cys Tyr Ser Ile Leu His Ala Val Asp Arg
 1505 1510 1515 1520
 Lys Leu Pro Ser Lys Thr Cys Pro Thr Cys Lys Asn Lys Phe His Gly
 1525 1530 1535
 Ala Cys Leu Tyr Lys Trp Phe Arg Ser Ser Gly Asn Asn Thr Cys Pro
 1540 1545 1550
 Leu Cys Arg Ser Glu Ile Pro Phe Arg Arg
 1555 1560

<210> 12
 <211> 183
 <212> DNA
 <213> Mus musculus

<400> 12
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 gcagactgag agccgggctg ccaccgccac catggggcgga aagaacaagc agcggactaa 120
 ggggaacctc aggggtgagtc ctgtggtgat ggtagccccg cggcctgcgg cccgggtgtc 180
 cag 183

<210> 13
 <211> 308
 <212> DNA
 <213> Mus musculus

<400> 13
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 gtggccgagc tgcagaactc ctgcgcaaag agcagggaac agtgcctggg ttcattgggt 120
 ttggcacatc tcacagtgcg ctgggctatg ttccggctgt tcaaggcgcg gaagacatag 180
 acagtcttgt agattccgat ttccgaatgg tgctgcggaa actttccaaa aaagatgtta 240
 caacaaagct aaaggcaagt tttctcattt ttacaatagt aattaagaat gtagttttgt 300
 tagaataa 308

<210> 14
 <211> 195
 <212> DNA
 <213> Mus musculus

<400> 14
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 tggaattatg tgcacagaga gagacacaga agccgtcaaa ggggttcttc catactggcc 120
 aagaatcttc tgcaaaatct cccttgtaag caagcattag cgttcatgag ctgtttctgc 180
 ttaaagggct acctc 195

<210> 15
 <211> 331
 <212> DNA
 <213> Mus musculus

<400> 15
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 gccgtgttcg agaggcgacg cagcaagctt ttgaaaaact tacccttaaa gtaaagaagc 120
 acttagctcc ctatttaaaa agcgtgatgg gctattgggt gatggctcag tgtgacacat 180
 atccaccagc tgcaactggca gcaaaagatg cattcgaagc cgctttccct ccaagcaagc 240
 aacctgaagc catagcgttt tgcaaggaag aaattacaac tgtgagtgtt tgcagccact 300
 gtgtccccgt gtttctcagt tgtctaaggc t 331

<210> 16
 <211> 153
 <212> DNA
 <213> Mus musculus

<400> 16
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 accatcttct gaaggagact cctgacacac tcagtgaacc tcagtaagct gcatgtttct 120
 aactaatgtg cactaggcat ttacttagtt ggt 153

<210> 17
 <211> 281
 <212> DNA
 <213> Mus musculus

<400> 17
 tgtagtttgg cttctttttt gcagtccttac ttgtttattt ttaactctag aactgtgcca 60
 gaggaagaga gagaggctaa gttccaccga gtcgtgacgt gctctttatt ggcactgaag 120
 agattgcttt gtttcttacc taacaatgag cttgattctc tggaggagaa atttaaataca 180
 cttttatcac agaataaatt ttggaagtat ggaaaacaca gtgtacctca ggtatgccaa 240
 tagcttcgag tttaaaactt gttttctgta actccgccac g 281

<210> 18
 <211> 274
 <212> DNA
 <213> Mus musculus

<400> 18
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 ctgccaaagt gagtccatct gtctgtctca gcattgatga cagtgaacct gtggtctgcc 180
 cagctctctg ggaggctgtg ctctacacgc tgacaactat tgaggatatgt aaggagagaca 240
 cacttcctta aacgccacgt gaaagagtgc atta 274

<210> 19
 <211> 291
 <212> DNA
 <213> Mus musculus

<400> 19
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 gccggggcct agctgctgtt atgtatcctt acctcttacc gttcatcagc aaactccctc 180
 agtccatcac agagccaaag ctggacttct tcaaaaactt cctcacctct ctagtaccg 240
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<210> 20
 <211> 236
 <212> DNA
 <213> Mus musculus

<400> 20

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gagaggacca aatcgagctc ttctgagtgc tcagctgtca tcccggcatt ttttgaatgt 120
ttgcggttta taatgcagca gaacttaggc gaggaggaga tgggtgcagat gcttatcaat 180
gagcaggtag gtttgctcag catccttata aatgagcagg tacgtttgct cagcat      236

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<210> 21

<211> 910

<212> DNA

<213> Mus musculus

<400> 21

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cagacacatt gagctcttgg gaagccaaag cagatgcaga gcgagaccct ggagctgttt 180
acaacttgga gaacgttctg ctaagcttct ggggaagact gtcagagatc tgcaccgaga 240
aatccgcca gccagaagca gatgtgaagt ccgttctgtg tgtgtctagc ctagtagggg 300
tccttcagag gccaaaggag tcaactggag tacacagaaa gaaaactgct caggtcagg 360
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agaacagcga gggctctgac ggaggggctc agtctcctct cagtaataca tcttcagact 480
tagtatctcc tttaaggaaa aaacctctgg aagacttagt ctgtaagctg gcagagggtga 540
gcattagctt tgtcaacgag cggaagtcag agcagcacct gcagtttctc tccacgctgc 600
tcgactcctt ctctccgctc caagtattta acattctcct cagtgacaaa cagaagaatg 660
tcgtcaaagc caaacctctg gaaataacca aacttgcaaa aaaaaatcct gcagttaagt 720
tcttatatca taaattgata ggctggctaa atgacagcca gaaagaggac gggggcttcc 780
tgggtggacat cttgtatagt gccctccgat gctgtgacag tgggtgtggaa aggaaagaag 840
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tgtggaagg                                     910

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<210> 22

<211> 142

<212> DNA

<213> Mus musculus

<400> 22

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tttttaaagc tgtatttttg tccttaactc tccaactttg tctgtttcag gaggacctga 60
agtggagttc tcttcttcag gtcattgaaa aggtatttta gccccctctc ccctttccct 120
ttctttttca atttatgtgt gt                                     142

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<210> 23

<211> 287

<212> DNA

<213> Mus musculus

<400> 23

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gtcagataa acatgcttta gtaactcctt ggctaaaagg cagtattctt ggagagaaat 120
tggttgcctt ggcagactgt ctttgtgata aggacttggg agccacaaca tctgaatccc 180
actcatcaga acagtggagt ctgctaagac tggcggttatc ccaacatgtc aaaaacggta 240
gggaatacaa ctccagcttt atagcagggg tgataatcct ttccacc      287

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<210> 24
 <211> 340
 <212> DNA
 <213> Mus musculus

<400> 24
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 ggatttatca gaagcggcaa acagtgactc ttcagtgtct tttgtctgtg atgtgggtcca 180
 tagcttcttc agttcagcag gaggaggctt gctaatagcca ccatctgaag acttggtatt 240
 aactctcttt cagttatgcg ctcagagcaa agaacggaca cacttgccag gtaagagcct 300
 gctgctcaga tattttctag gcaatctcgg ctctgacctc 340

<210> 25
 <211> 254
 <212> DNA
 <213> Mus musculus

<400> 25
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 ctgtaaactg aagaatactt tgctttctgg tgtaaattta ttgggtccatc aaactgcaag 120
 tacatatgag cagagtacct tcttacgttt gtctgttctg tggctgaagg accagggttca 180
 gtcttcggct ttggataaca caaggtaaca ttttgtgcac agttacatgg tgtcccttat 240
 atactgtctc ctcc 254

<210> 26
 <211> 245
 <212> DNA
 <213> Mus musculus

<400> 26
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 ctcttgtctg ctgctggcga cttgctgggt actctttag agagtgagga cacgtctctt 120
 cttggagttt atatcggaag tgtaatgcc agtgacagcg agtgggaaaa gatgaggcag 180
 gctcttctctg ttcagggtgtg tcttccactg cagcgcgcag ctcacctcgg atttctagtc 240
 cattc 245

<210> 27
 <211> 287
 <212> DNA
 <213> Mus musculus

<400> 27
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 gacctctttt agagggaagg ctgagtttaa attatgaatg cttcaagaca gattttaagg 120
 aacaagacac aaagactctt cccaaccatc tgtgtacttc atcggtattg agcaaaatga 180
 tcttagttgc ccaaaaaaag aaattagtc tagaagacaa cgtccttgaa aaaataagta 240
 agtatctgcg aggttcagggt agacactctg tgatcttctt ctgtgct 287

<210> 28
 <211> 260
 <212> DNA
 <213> Mus musculus

<400> 28
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 gctgtattca ctgcagtggt gtgaagaact cgacaatgcg ccatctttcc taagtggatt 120
 ttgtggaatc cttcaaaaaa tgaatataac ttacagcaac ttatctgtac ttagtgagac 180
 ttctagcctc ttgcagctgt tatttgacag gtaagacgcc ctttcaattt gttttaaaat 240
 tggctttccc atccataaga 260

<210> 29
 <211> 205
 <212> DNA
 <213> Mus musculus

<400> 29
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 aatggcacac tttgggtctt tattattgct aagttgatcc tttcccgaag tatttcatct 120
 gatgaagtga aaccatacta taaaagaaaa gaaagggtacc cttagttact atgtttccac 180
 tctgcagttt attattagag tgggt 205

<210> 30
 <211> 243
 <212> DNA
 <213> Mus musculus

<400> 30
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 ctaacagaag gtagtttgca taccattcaa agtctctgtc cattcttgtc taaagaagag 120
 aagaaggaat ttagtgctca cagtataccc gcttttttgg gttggactaa agaagacctt 180
 tgcagtatta atggtaagtc actgggcaac attctacatt ttaattgttt cttgagatta 240
 gag 243

<210> 31
 <211> 236
 <212> DNA
 <213> Mus musculus

<400> 31
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 acatcttgcc attttcaatt cttgtctgca aaccagaagt atagacgaca aacagctatt 120
 gcatggcata ttaaaaatta taacaagctg gaggaacag catgaagata tttttctttt 180
 tagctggtag gtagtacttt attcccacat taaaatgtgg gccagattc tgtatt 236

<210> 32
 <211> 251
 <212> DNA
 <213> Mus musculus

<400> 32
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 gaagcagagtc cagaggtcct tggtttaaac atagagatca tgcggttcct ttccttggtt 120
 ctcaagcact gcgcgtaccc gctcccgtcg gcagacagtg aatgggactt catcatgtgc 180
 tccatgctgg cttggttgga ggtaaatacag cccgatgtgt catcccctga gttgggcctt 240
 tgcacactct g 251

<210> 33
 <211> 314
 <212> DNA
 <213> Mus musculus

<400> 33
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 agaaccaggc tctgtactct gttccacttg tgcagctgtt tgcctgtgtc agctttgatc 120
 tggcctgtga tctctgtgcc ttttttgact caataactcc agatattgtt gacaatcttc 180
 ctgtaaactc catcagttag tggaaagagt ttttttctaa aggcattcac agtttgctat 240
 tacctctttt ggtaaatacgt atcggttaagt gcaaaggggt atgatgatgg taattattga 300
 aaatggctgt tgac 314

<210> 34
 <211> 338
 <212> DNA
 <213> Mus musculus

<400> 34
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 agacctatct gaaacgtcct ttcagaacgc aatgctgaaa cccatgtgtg aaacactaac 120
 atacatctcc aaggaccagc tactgagcca caagctccct gcgagattgg ttgccagcca 180
 gaaaacaaac ttgccagagc acctccagac tctgctgaac actttgaccc cactgcttct 240
 cttcagagcc agacctgtgc aaattgctgc ttatcatatg ctgtgcaagt aagacattgg 300
 cagtggcata agtattttgt ctctaaagca tgatgcat 338

<210> 35
 <211> 175
 <212> DNA
 <213> Mus musculus

<400> 35
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 gaattgccac agcatgatca ggacaatctg aggtcgatat gagatgaaga ggaagaacca 120
 gccttgtaag ggttttgagt gtgtgtttgc ttgtgtgagt gcaggttaca ggacc 175

<210> 36
 <211> 287
 <212> DNA
 <213> Mus musculus

<400> 36
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 gccgcgctga tgtctctcct cagctctcag gaggagctgc tggagaatgt cctgggctgt 120
 gtccctgtgg gccagatcgt gaccgttaag ccactgagcg aggacttctg ctatgtcctg 180
 ggatacctcc tcacttgga gtttaatactg actttcttca aagctgcac gtctcaggta 240
 aataagttct gggctgttgg aggggtgggg gctgttgcat tgcagtg 287

<210> 37
 <211> 272
 <212> DNA
 <213> Mus musculus

<400> 37
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 tgtattcaat gtaccttcgg aaaacaaaga gtctgaataa attactctat catctcttca 120
 gacttatgcc agaaaaccct acgtacggag agacagctat tgaggatatca agtaaagacc 180
 ccaagacctt cttcaccgag gaggttcagc tgagtattag aggtcagtgg gctacacgtg 240
 tgtgggctgc acatgtgtgg gctacacgtc tg 272

<210> 38
 <211> 321
 <212> DNA
 <213> Mus musculus

<400> 38
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 tcttcctgat catatcccac acctggcgtg ctcgggtctat cacatgactt taaaagactt 120
 gcctgccatg gttaggctat ggtggaatag cagtgagaag cgtgtcttca atattgtaga 180
 tagatttaca agcaagtatg tcagcaatgt tctttctttt caagaaatat cttctgtaca 240
 aacaagtaca cagctattca atggcatgac ggtagtagtatt gtcttggttt ttttctagag 300
 aatgaatac cagttatatt t 321

<210> 39
 <211> 295
 <212> DNA
 <213> Mus musculus

<400> 39
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 gagctactac tcgagaagtg atggctacgt acaccatcga agacatagtc attgaactca 120
 taatacagtt gccttccaat taccactgg gctcaataac agtggaaagt gggaagagga 180
 tcgggggtggc tgtgcagcag tggcgaaact ggatgctgca gctgagcacg tacctcactc 240
 accaggatatg ctgccacgag cgcactggtc actcacacta gagcacatct gtctg 295

<210> 40
 <211> 268
 <212> DNA
 <213> Mus musculus

<400> 40
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 tcatggaagg cttagcatta tggaagaata atgtagacaa acggtttgaa ggtggtgaag 120
 attgtatgat ctgcttctca gttattcatg gtttcaacta ttctcttccc aaaaaagcct 180
 gtagaacatg caagaaaaag tttcactcag cttgcctggt aaggcgaagg gaaatctctt 240
 aacattcttt gtggtctgta tatgttat 268

<210> 41
 <211> 271
 <212> DNA
 <213> Mus musculus

<400> 41
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 ttacatctag caacaagtcc acttgcccgc tctgccgtga gacctttttc tgagggtttt 120
 ttcattggaa gttgtcgctg ccgtaggtca agccaaaggg aatggattgg ctccaccttg 180
 aagtactgat gtgaagccag tgagcatgac aaagtgccat ctgtcagtat gatcctcaaa 240
 tcaggcaacc tctgcagatt gctttgtaaa t 271

<210> 42
 <211> 42
 <212> DNA
 <213> Mus musculus

<400> 42
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<210> 43
 <211> 42
 <212> DNA
 <213> Mus musculus

<400> 43
 cttcttcagg tcattgaaaa ggaatttttag cccctctctcc cc 42

<210> 44
 <211> 286
 <212> DNA
 <213> Homo sapiens

<400> 44
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 acaggggtggg tggcggaaaa gggcccgggg gaagttatta cagggtgtcc tcttccgccg 120
 ccagaagccg gaagtttgtt cccggacgtg tcaaccgggg tctgagtgtc cagagtacag 180
 ctgcaaccgc gaccatgggc gggaagaaca agcagcgaac taaagggaac ctgagggtga 240

gcgggggctg gctcggccga cccgggagcc tcgcttcgag gcggct

286

<210> 45
 <211> 304
 <212> DNA
 <213> Homo sapiens

<400> 45
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 gtggccgagc tgcagaactc cttgccaaag aacaggggaa agtgcctgga tttattgggt 120
 ttggaacatc tcagagtgcac ctaggctatg ttccctgctat tcaaggagct gaagaaattg 180
 acagtcttgt agattctgat ttccgaatgg tgctgcggaa actttcaaag aaagatgtca 240
 ccacaaaatt aaaagcaagt tttcttggtt tcataaaaat tatcaagaaa atccctttgt 300
 taaa 304

<210> 46
 <211> 199
 <212> DNA
 <213> Homo sapiens

<400> 46
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 aatttggaac catgtgtaca gagagagaca cagaaactgt gaaaggagtt cttccatatt 120
 ggccaagaat tttttgcaaa atttcacttg taagtattaa aactttgcta gtttatttct 180
 gttgtatatt ttttggttg 199

<210> 47
 <211> 331
 <212> DNA
 <213> Homo sapiens

<400> 47
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 gtcgcgtccg agaagccaca caacaagctt ttgaaaaact tacccttaaa gtaaagaaac 120
 agttggctcc ctacttaaaa agtttaattg gatattggct aatggctcag tgtgatactt 180
 acacaccagc tgcgtttgca gcaaaagatg catttgaagc ggcttttcct ccaagcaagc 240
 aacctgaagc catagcattt tgtaaggatg aaattacaag tgtaagttct ggaatcattc 300
 tgaatctatt tttttttttt aagtatttaa g 331

<210> 48
 <211> 153
 <212> DNA
 <213> Homo sapiens

<400> 48
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 atcatcttat aaaagaaaca cctgatacac tcagtgaccc gcagtaagtt gtattgtttc 120
 attgtaactc atgttaagga tttgtttcac tca 153

<210> 49
 <211> 281
 <212> DNA
 <213> Homo sapiens

<400> 49
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 gaggaagaaa gagaagctaa attctaccgg gttgtaactt gttccttatt ggcattaaag 120
 agattacttt gccttttacc tgataatgag cttgattctc tggaggagaa atttaagtct 180
 cttttatcac agaataagtt ttggaagtat ggaaaacaca gtgtacctca ggtatattaa 240
 tcttttttat ctttaagacat ttctctgatt ccttaccccc a 281

<210> 50
 <211> 274
 <212> DNA
 <213> Homo sapiens

<400> 50
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 cttattttga gttagtctct gcattgtgcc agcgattcc acagttgatg aaagaggaag 120
 catccaaagt gagcccatca gttctactta gcattgatga cagtgaccca attgtctgcc 180
 cagctctctg ggaagctgta ctctatacac ttacaactat tgaggatatgt aagagaggca 240
 catttagtac actgaggaat gaacctatga gata 274

<210> 51
 <211> 291
 <212> DNA
 <213> Homo sapiens

<400> 51
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 ttcattgtaa tgcaaaaaag agtgtgtttc ccaagctatc aactgtgatt cgtgaagggt 120
 gtcgggggtct agctactgtc atatatacctt accttctgcc attcatcagc aagctccctc 180
 agtccatcac aaatccaaag ttggattttc tcaaaaattt cctcacgtct ctagttgctg 240
 ggtaagtaat ttaaattttt gattttttaa acaaaacaga ttttcttggt t 291

<210> 52
 <211> 236
 <212> DNA
 <213> Homo sapiens

<400> 52
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 gagagaacta aaaccagctc tttagagtcc tcggcagtaa tatctgcttt ttttgaatgc 120
 ttacggtttta taatgcagca aaacttaggt gaggaagaga ttgaacagat gctcgtcaat 180
 gatcaggtat ctataatgta aaagtcgtca gtctctttgc atactgatta tgtagg 236

<210> 53
 <211> 910
 <212> DNA
 <213> Homo sapiens

<400> 53
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 ttattgatgc agttctcaaa gaccaggat tgcaacatgg gcagctattt aaccatttag 120
 cagaaactct aagttctctg gaagccaaag cagacacgga aaaagatgaa aaaacagctc 180
 acaacttgga gaacgtactg atacatttct gggaaagact gtcagagatc tgtgttgcca 240
 aaatcagtga gccagaagct gatgttgagt ccgttttggg tgtatctaac ctattacagg 300
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 agaagattga aggtctggaa ttaacaactg aaccttctct cactcataat tcttcaggcc 480
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 tgggtggacat tttgtacagt gctctccggg gctgtgacaa tgatatggaa agaaaaaaag 840
 tcttggatga tctaaccaag gtattcctgt tgtatatctt ttcaaactat ttgaataata 900
 gatgagtaga 910

<210> 54
 <211> 142
 <212> DNA
 <213> Homo sapiens

<400> 54
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 aatggaattc tcttcttaag attattgaaa aggtatctta gggatttttt tttctttttt 120
 tttttgtatt tatgggaata ga 142

<210> 55
 <211> 290
 <212> DNA
 <213> Homo sapiens

<400> 55
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 gttcagataa acatgcttta gtaactcctt ggctcaaagg cgatatcctt ggtgagaaat 120
 tgggtcaactt ggcagattgt ctttgtaatg aggacttgga atccagggtta tcttcagaat 180
 ctcacttctc agaaagatgg actcttctaa gcttggtatt atcccaacat gttaaaaaatg 240
 gtaggacaaa tatggctttt gttttctaata ggggaatagc ccatttctcc 290

<210> 56
 <211> 340
 <212> DNA
 <213> Homo sapiens

<400> 56
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 tggagacgta tatgttgaaa gaatcattgt tagacttcat gaaactttat tcaaaacaaa 120
 gaaattatca gaagctgaaa gcagtgactc atcagtgtct tttatctgtg atgtggccta 180
 taactatttc agctcagcga aaggatgctt gctaatagcca tcatctgaag atttattatt 240
 aactctcttt cagttatgtg ctccagagcaa agaaaaaaca catttgccag gtaatagcct 300
 actgctcaaa tgttttgttg ggaatctccg gctctgacct 340

<210> 57
 <211> 254
 <212> DNA
 <213> Homo sapiens

<400> 57
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 ctgtaaaactg aaaaatactt ggctctctgg tgtaaattta ttggttcatc aaactgacag 120
 ttcataataaa gagagtacct tcctacattt gtctgctctg tggctgaaga accaagttca 180
 ggcttcatct ttggatatca acaggtaacc ttttttgagc ttggtttcag tgtctctttt 240
 atacttgaac agtg 254

<210> 58
 <211> 245
 <212> DNA
 <213> Homo sapiens

<400> 58
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 ctcttgctctg ctgttgatga tttgctaaat acacttctag agagtgaaga ttcttatctt 120
 atgggagttt atattggaag tgtaatgccg aacgacagtg aatgggaaaa gatgaggcag 180
 tctcttccta tgcagggtatt ttggaaattg aagagtacat atctcattct gaagtttgga 240
 tttca 245

<210> 59
 <211> 287
 <212> DNA
 <213> Homo sapiens

<400> 59
 caattgctta ggtaataaat aattttgtat ataacgtatt cttttcacag tggttacata 60
 gacctctttt agagggaaga ttgagtttga attatgaatg tttcaaaaca gattttaagg 120
 aacaggacat aaagacactt cccagccatt tgtgtacttc agcattattg agcaaaatgg 180
 tcttaattgc actgagaaaag gaaacagtct tagaaaataa tgagcttgag aaaataagta 240
 agtatatatg agtattttaca tataacataa tgcatgaatg aatataa 287

<210> 60
 <211> 260
 <212> DNA
 <213> Homo sapiens

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<400> 60
ggtttgttca cagagtgcct ttcataatct ggtgctgtct cttcttttag ttgcagaact 60
gctttattca ctgcagtggg gtgaagaatt agataaccca cctatctttc taattggatt 120
ttgtgaaata cttcaaaaaa tgaatattac gtatgataac ttacgtgtac ttggtaatac 180
gtcgggcctt ttgcagctgt tatttaacag gtaagaatct ctttcaattt gtttttaaaa 240
tgactatgct acttctttat                                     260

```

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<210> 61
<211> 205
<212> DNA
<213> Homo sapiens

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<400> 61
attcagtatg ctttcaaaac ggaatataat ttttttcttt cttttttcag gtccagagaa 60
catggcacac tgtggctctt tattattgct aagttgatcc tttcccgaag catttcatct 120
gatgaagtaa aaccacatta taagagaaaa gaaaggattt cttatttaaa atgtttttac 180
tttgtagttt actgtaatcg gtcac                                     205

```

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<210> 62
<211> 243
<212> DNA
<213> Homo sapiens

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<400> 62
actgtatggt tggaagaaat ctaacttggt tttttttttt ctttaaacag tttttttcca 60
ctaactgaag gcaatttgca taccattcaa agtctatgtc catttttgtc aaaagaagaa 120
aagaaagaat ttagtgctca atgtatacct gctcttttgg gctggactaa gaaagatctt 180
tgcagcacta atgggttagt gcttgataat aaatatttca ttaatttaatt tattgcttga 240
gat                                     243

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<210> 63
<211> 236
<212> DNA
<213> Homo sapiens

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<400> 63
gcgatatagt tcttaaatat ttttaatttt cattttgaat tttacttttag gaggttttgg 60
acatcttgcc attttcaatt cttgtctgca aacaaaaagt atagatgatg gagagctatt 120
acatggaata ttaaaaatca taatatcctg gaagaaagag catgaagata tttttctttt 180
cagttggtag gtgatacttt atactatggt tttccttcag tatacaattc agacaa 236

```

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<210> 64
<211> 245
<212> DNA
<213> Homo sapiens

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<400> 64
tgaatgtcaa tataatcttt tattgtcttt tgtttttatc tttatcacag taatctatca 60
gaagcaagtc cagaggtact ggggtgaaat atagaaataa tccggtttct ttccctattt 120
ctgaaatact gctcatcccc tttggcagag agtgagtggt acttcatcat gtgctccatg 180

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ttggcttggt tggaggtaaa ttaacccgat atgtcatcac ctcttggtggg tttttgtaca 240
tactt 245

<210> 65
<211> 314
<212> DNA
<213> Homo sapiens

<400> 65
gtgttctggt agaagtctgt ttacctatctt cattttttatt gttttttcag acaacaagtg 60
agaatcaggc attgtattct attccacttg tgcaactggt tgcctgtgtc agctgtgatt 120
tggcctgtga cctcagtgtt ttctttgatt ccacaactct ggataccatt ggcaatcttc 180
ctgtaaatct aatcagtga tggaaagaat ttttttccca aggcattccac agtttgcttt 240
tacctatctt ggtgactgtt acaggcaagt gaaaaaggga ataatagtga gattgattca 300
ttggaaatga ctta 314

<210> 66
<211> 338
<212> DNA
<213> Homo sapiens

<400> 66
atactaactt tcttttgaga cgtgcatggt tctttccttt ttgtcattag gagaaaacaa 60
agatgtgtct gaaacatcct ttcagaatgc aatgctgaaa cccatgtgtg aaacattaac 120
gtatatctca aaggaacagc tattgagtca caaacttcct gcaagattag ttgctgacca 180
aaaaacaaac ttaccagaat atctccagac tttgttaaatt acattggccc cattactcct 240
cttcagagct aggctgtgtc aaattgctgt ttatcatatg ctatacaagt aagaattcat 300
ccaattgaat caatgttaca gtggtctaaa aaaataga 338

<210> 67
<211> 175
<212> DNA
<213> Homo sapiens

<400> 67
taataaacag tttaatatca catattttaa aataatgttc taatttctag attgatgcct 60
gaattaccac agtatgatca ggataatcta aagtcatacg gagatgaaga agaagagcca 120
gccttgtaag gtttttttaa ataatttgtt ttattaaatt cttataatcc atctc 175

<210> 68
<211> 287
<212> DNA
<213> Homo sapiens

<400> 68
aaggaatgaa ttataaagaa aacttggtgtt gtttaatcat tgattcttag gtcaccacca 60
gcagactga tgtctcttct tagcattcaa gaggacttac tagaaaatgt tttggggtgt 120
attcctgttg gacagatagt tactattaaa ccactgagtg aagacttctg ttatgttctg 180
ggataccttc tcacttgga attaatacta actttcttca aagctgcac atcacaggta 240
aataaatatg tgacaacttt cgatagttct gtcctaatat gcttctg 287

<210> 69
 <211> 272
 <212> DNA
 <213> Homo sapiens

<400> 69
 aattgtcttg gtgtatttgg ttactaaca aattctttgc tctccaccag cttcgggctt 60
 tgtattccat gtatcttcgg aaaacaaaga gtttgaataa attgctctat cacctgttca 120
 ggcttatgcc agaaaatcca acctatgcag agacagcagt tgagggtcca aataaggacc 180
 ctaaaacatt ctttactgag gagctccagc tgagtattag aggtcagtaa gatatgtgtt 240
 tatgttcttt cttggacact agattcagac ta 272

<210> 70
 <211> 321
 <212> DNA
 <213> Homo sapiens

<400> 70
 ttctatataa gaaatatatg ttactaatca ataatttgtt ttttcctcag aaacaacaat 60
 gcttccatac cacattccac acttggcttg ttcagtctat catatgacat taaaagactt 120
 gcctgccatg gttaggttgt ggtggaatag cagtgagaag cgtgttttca atattgtgga 180
 tagattttaca agcaagtatg tcagcagtgt tctttctttt caagaaatat cttctgtaca 240
 aacaagtaca caactattta atggcatgac ggtagtatt gtcttgactt tctctagaaa 300
 agttgtttta atattgggta t 321

<210> 71
 <211> 295
 <212> DNA
 <213> Homo sapiens

<400> 71
 gggtgaaaga cagaaatttg gcaaacaaaa tatectttgt tgtattgcag gttaaagctc 60
 gagctactac tcgagaggta atggctactt atactattga ggacatagtt attgaactta 120
 taatacaact gccttcaaat tatccactgg gttcaataat agtagaaagt gggaaaagag 180
 taggagtagc tgttcagcag tggcggaact ggatgctgca gttaagcact tacctaccc 240
 atcaggtaag tttctgttta cacatttggc tttaaaaact tggaaaagat gatct 295

<210> 72
 <211> 268
 <212> DNA
 <213> Homo sapiens

<400> 72
 aaattggtgg ttatcagtgt gtagtgactt atttttcttc ttgttaacag aatggaagta 60
 ttatggaagg cttagcttta tggaaaaata acgtagacaa acgttttgag ggtgttgaag 120
 attgcatgat ctgtttctca gtcattcacg gtttcaacta ttcccttccc aaaaaagcct 180
 gtagaacatg caagaaaaaa ttccattcag cctgcttggg aagtctaaag agaaattaac 240
 ttacttatat tttatgtatt ttatacac 268

<210> 73
 <211> 163
 <212> DNA
 <213> Homo sapiens

<400> 73
 gaggagaact ttaaaagttc ttttagtatt taaaaccttt tctttttcag tacaaatggg 60
 ttacatctag caacaaatcc acttggtccac tgtgtcgtga gacgtttttc tgagattttt 120
 ttcactggaa gggatccctg aagtacatca aacaaaggca ttg 163

<210> 74
 <211> 44
 <212> DNA
 <213> Homo sapiens

<400> 74
 cttcttaaga ttattgaaaa ggtatcttag ggattttttt ttct 44

<210> 75
 <211> 44
 <212> DNA
 <213> Homo sapiens

<400> 75
 cttcttaaga ttattgaaaa ggaatcttag ggattttttt ttct 44

<210> 76
 <211> 22
 <212> DNA
 <213> Mus musculus

<400> 76
 cattgaaaag gtatttttagc cc 22

<210> 77
 <211> 22
 <212> DNA
 <213> Mus musculus

<400> 77
 cattgaaaag gtatttttagc cc 22

<210> 78
 <211> 22
 <212> DNA
 <213> Mus musculus

<400> 78
cattgaaaag gaattttagc cc

22

<210> 79
<211> 22
<212> DNA
<213> Mus musculus

<400> 79
cattgaaaag gaattttagc cc

22

<210> 80
<211> 4
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic zinc
finger motif

<400> 80
Cys Cys His His
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<210> 81
<211> 4
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic zinc
finger motif

<400> 81
Cys Cys Cys Cys
1

<210> 82
<211> 4
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic zinc
finger motif

<400> 82
Cys Cys His Cys
1

<210> 83
<211> 8
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic zinc
finger motif

<400> 83
Cys Cys Cys His Cys Cys Cys Cys
1 5

<210> 84
<211> 8
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic zinc
finger motif

<400> 84
Cys Cys Cys His His Cys Cys Cys
1 5